Issue 75

PS

1959 Series

THE PREVENTIVE MAINTENANCE MONTHLY

WHO'S IN CHARGE

That can be a real ticklish question under certain conditions.

Real embarrassing (and dangerous) . . . if the situation's not right.

When it comes to Preventive Maintenance, tho, there's no if, why or but. AR 750-5, para 9, pins PM down so you don't have to guess about who's in charge. Here's what it says:

a. Command responsibility.
Commanders are required to insure that all equipment issued or assigned to their command is maintained in a serviceable condition and is properly cared for and used, and that personnel under their command comply with technical instructions.

'Course, that one hits your CO. But, everybody's not a commander . . . how about you?

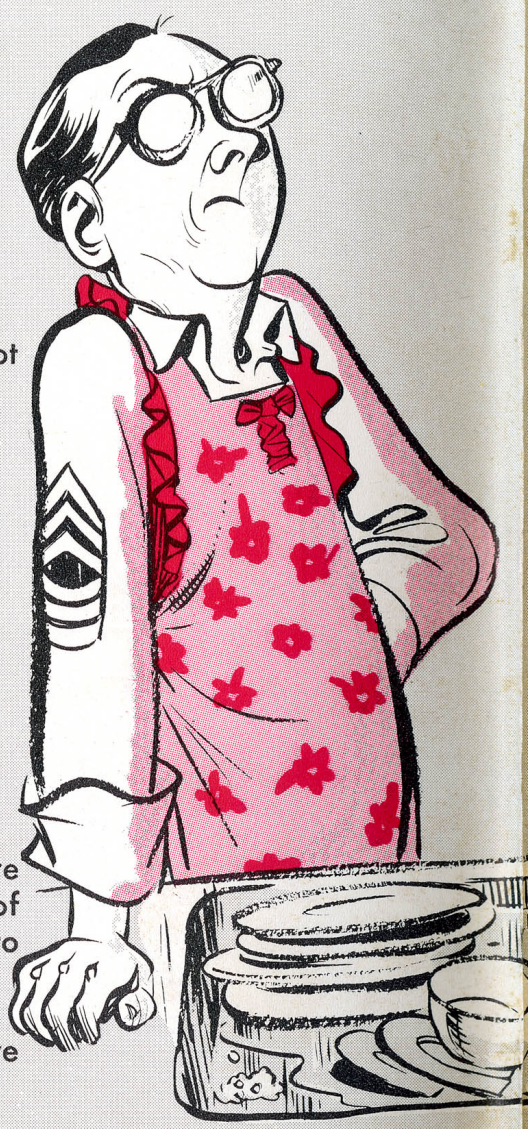
The next paragraph pulls no punches:

b. Direct responsibility.
Direct responsibility is defined as responsibility of individuals for equipment entrusted to them for their individual use or for use by subordinates.

That takes care of **everybody** . . . whether you're an individual soldier issued equipment to take care of and use right, or a man like your sergeant who has to see that his men take care of their equipment.

So, it's all pinned down—

You are in charge when it comes to Preventive Maintenance.



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PS wants your ideas and contributions, and is glad to answer your questions. Just write to: **Sgt Half-Mast, PS, Raritan Arsenal, Metuchen, New Jersey.** Names and addresses are kept in confidence.

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HERE?

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Batteries need special care when the mercury's low, 'cause you and the cold weather put extra strain on 'em. You'll be usin' 'em a lot more for starting and for accessories, like personnel heaters, lights, etc.

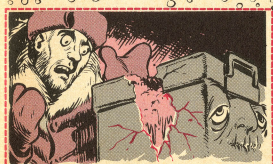
OUT OF THE DEEPFREEZE

COMES OL'MAN WINTER AND YOU AND YOUR TANKS AND OTHER TRACKED VEHICLES BETTER BE READY,,, MY VERN!...OR HE'LL KEEP YOU HOLED UP FOR DAYS ON END. NOTCHARLY, SNOW, ICE AND NEAR-ZERO TEMPERATURES MEAN YOU GOTTA USE A LEETEL EXTRA EFFORT WHEN YOU DO YOUR **PM**, BUT THAT EXTRA EFFORT'LL PAY OFF--WHEN YOU NEED IT MOST.

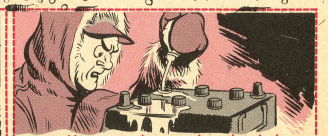
HERE'S A FEW **WHY'S** AND **HOW'S**, **DO'S** AND **DON'T'S** YOU CAN USE TO PAMPER YOUR VEHICLES AND KEEP 'EM MOVIN'!

ELECTRICAL SYSTEM

Batteries need special care when the mercury's low, 'cause you and the cold weather put extra strain on 'em. You'll be usin' 'em a lot more for starting and for accessories, like personnel heaters, lights, etc.

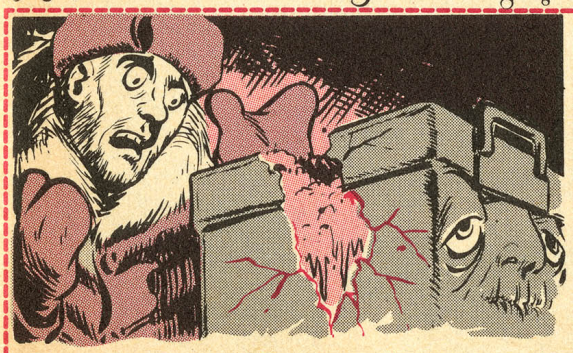


Always keep 'em fully charged, 'cause a discharged battery could freeze and bust the plates and casing.



Never add water in subzero weather unless the battery is going to be charged immediately, 'cause the water won't get mixed with the battery acid—it'll just freeze. (Unless you warm a storage battery to 35° F first, it won't receive an adequate charge from the generator.)

DEEPFREEZE



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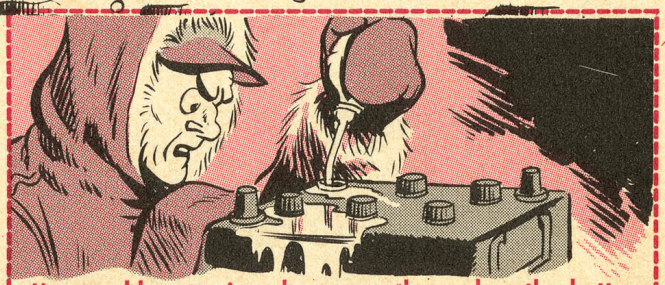

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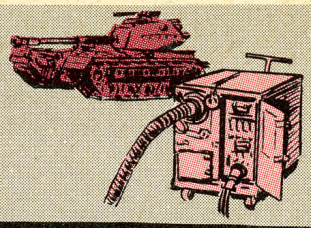
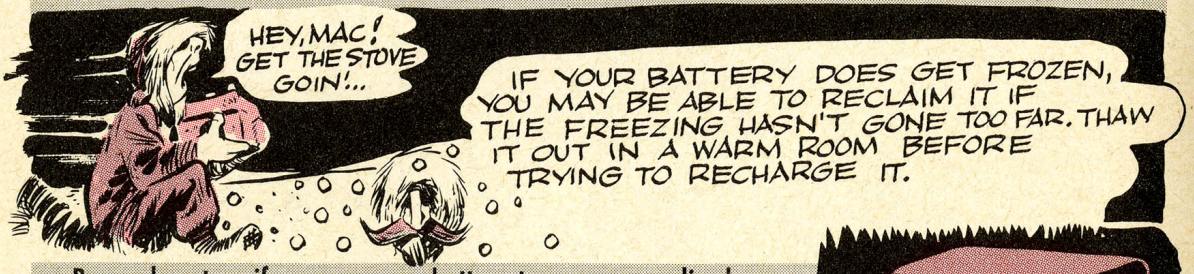
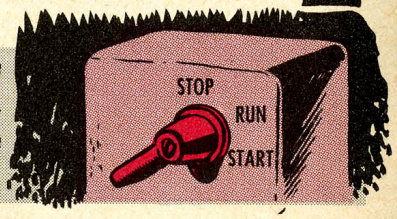
If you can avoid it, don't remove the battery from your tank to store it inside overnight, 'cause extra handling means more wear and tear on the terminals and leads. Best thing to do is leave the battery right in the vehicle, and use your standby heater to warm it up before operation.

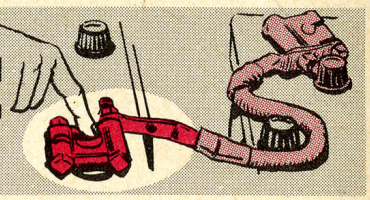




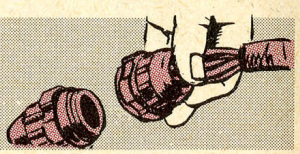
Remember, too, if you use your battery to run your radio, be sure to keep either your main engine or your auxiliary engine running. This'll keep you from running your battery down to a point where you won't be able to re-start your engine.



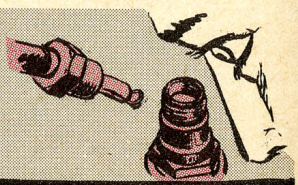
Keep all wire connections, terminals and ground straps clean and tight, and give the battery posts a thin coat of grease to keep 'em from corroding.



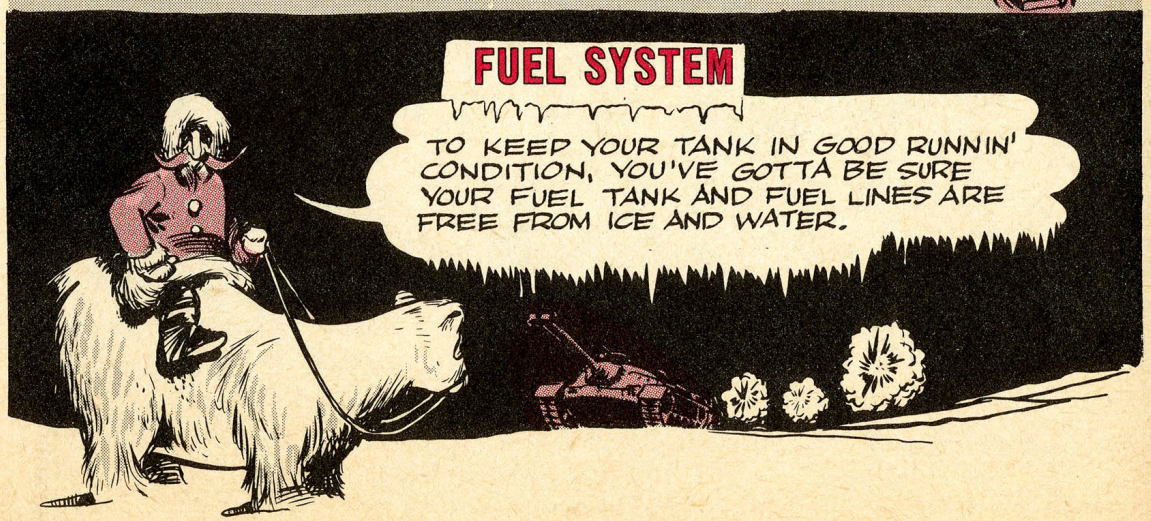
Check all electrical wiring to see that it's in good shape and firmly connected. Look for worn spots and loose or missing grommets.

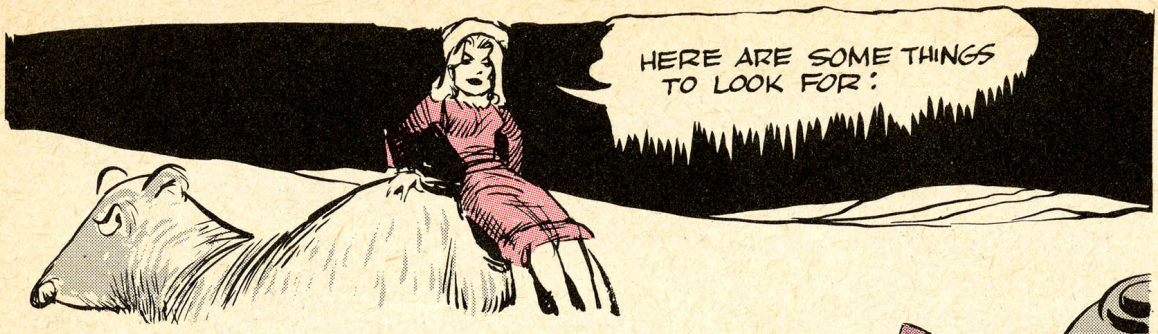


Check spark plugs for any sign of ice or moisture, and handle 'em careful-like, 'cause it's easy to break the insulators in cold weather.

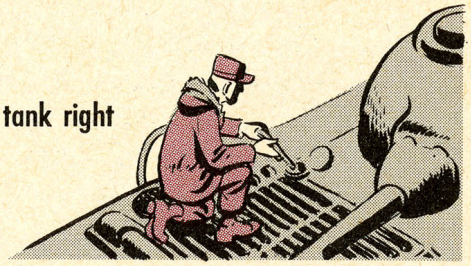


FUEL SYSTEM

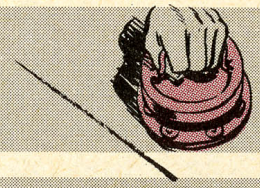




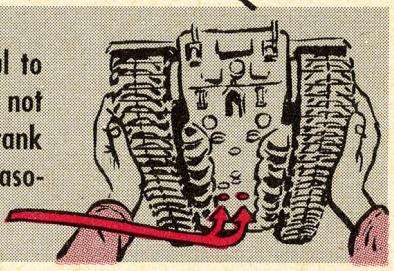
Condensation in the fuel tank. Avoid this by filling the tank right after you've operated the vehicle.



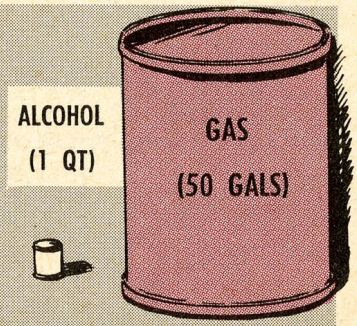
Snow in the fuel tank. Avoid this by carefully filling the tank and replacing the cap snugly.

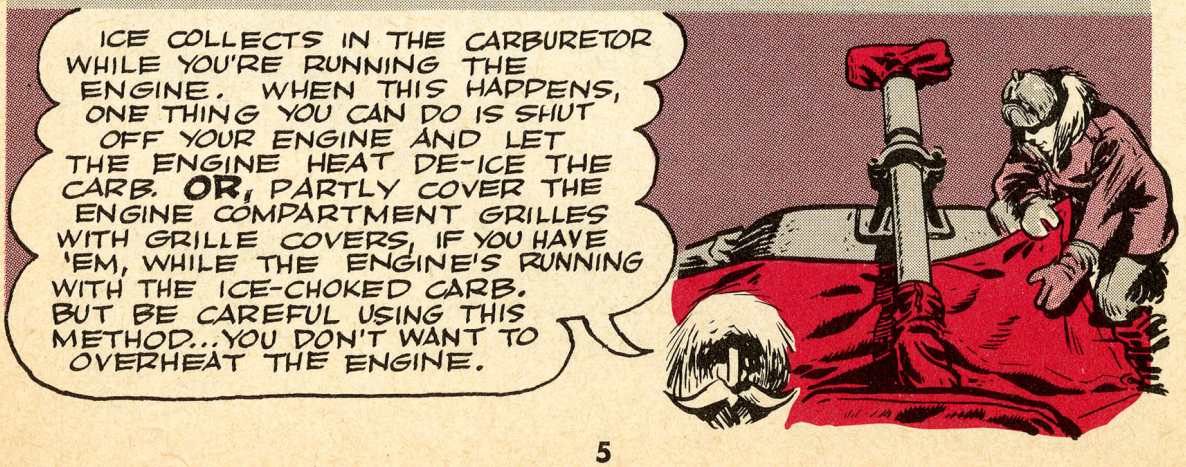


Water in the fuel container you use to fill the tank. Be careful to keep snow out of those cans and keep 'em capped tightly when not in use. If water does contaminate your fuel, drain the fuel tank from the bottom-most drain plug. Since water is heavier than gasoline, it'll settle to the bottom, and will drain off easily.

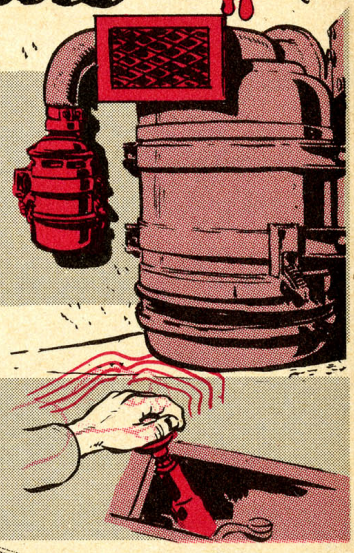


Ice in fuel lines and tanks. Where possible, move your vehicle into a warmed shop to thaw the ice in the lines and tanks before trying to drain 'em. Then, drain the lines and tanks, and refill with fuel. Add one quart of denatured alcohol Grade III to every 50 gallons of gas. Don't forget to add a proportional amount of alcohol every time you refill the tank. FSN 6810-201-0905 gets you a five-gallon can of alcohol from the Chemical Corps.

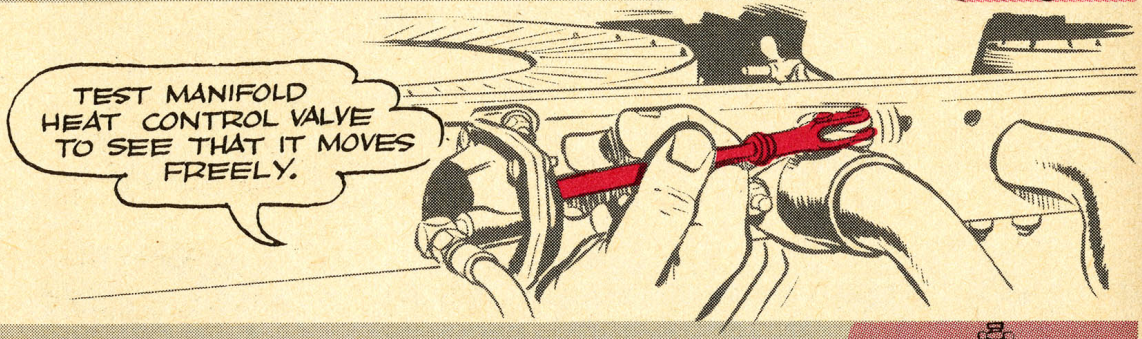




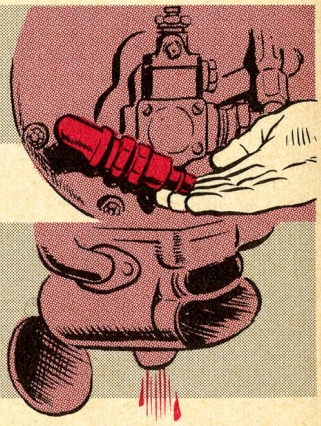
Dirty, clogged air cleaner. Drain and clean thoroughly with mineral spirits. As long as there's no snow, refill the air cleaner with the oil your LO calls for, but if you've got deep snow, just add about half the normal amount of oil to the air cleaner. This way, when water collects in the oil pan, the oil level won't rise to a point where it'll get sucked into the engine.



Check to see that the priming system is installed and works OK. Remember, you'll need to prime a little more in cold weather but don't overdo it—could cause hydrostatic lock.

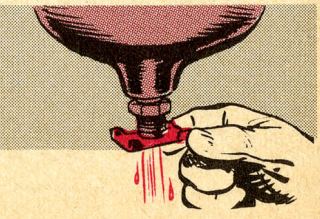


Check for fuel line leaks. You're likely to get more of 'em in cold weather.



After operation, drain the main engine hot-spot manifold of all condensation to keep ice from forming—could restrict the flow of hot exhaust gasses under carburetor.

Last—but most important—drain the fuel filter after every operation —especially when the tank is parked out in freezing weather.

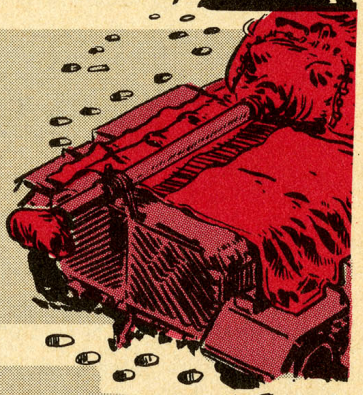


COOLING SYSTEM

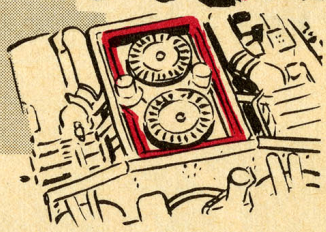
COOLING SYSTEMS NEED EXTRA ATTENTION, TOO, SO — —

Raise the cooling system temperature to 140° F as soon as possible after starting and keep it above 140° F while operating.

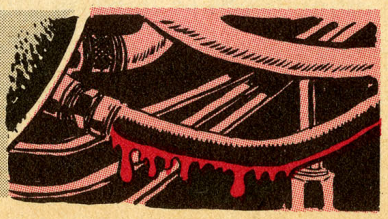
Keep hood louvers and engine compartment grilles covered before starting with grille covers—you can use heavy cardboard, tarps, quilted covers or overcoats in a pinch, but don't forget the covers are there when you're ready to take off. In real cold weather, when it's difficult to keep the engine at operating temperature, keep part of the grilles covered while operatin'. Too much cover may overheat your engine, so don't overdo it.



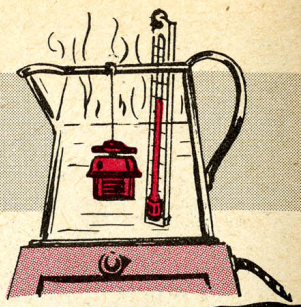
Never remove air baffles or shrouds for make-believe better air circulation. Removing 'em will only hamper the controlled air flow around your engine.



Inspect for leaks and clogged air or water passages, and check all rubber hoses for cracks and fraying.

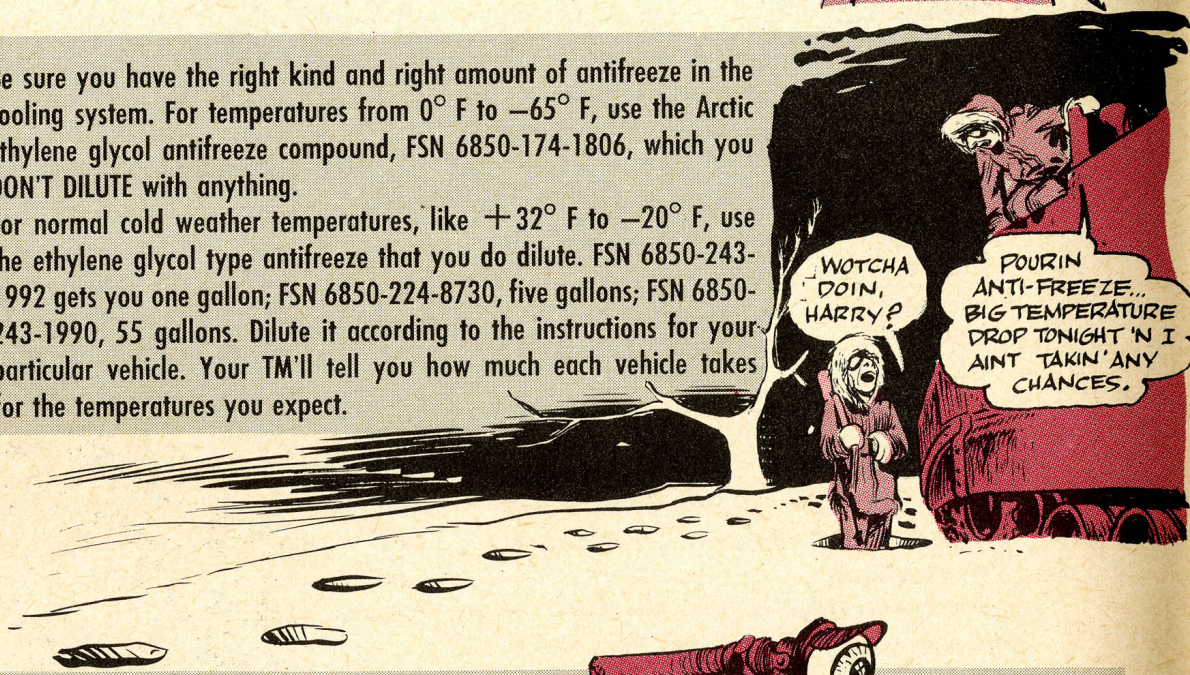


Test your thermostats to see that they open and close at the right operating temperatures. You can do this by removing them and dunking 'em in water heated to the right temperature.

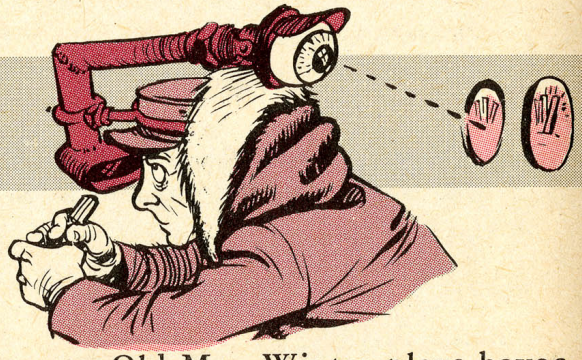


Be sure you have the right kind and right amount of antifreeze in the cooling system. For temperatures from 0° F to −65° F, use the Arctic ethylene glycol antifreeze compound, FSN 6850-174-1806, which you DON'T DILUTE with anything.

For normal cold weather temperatures, like +32° F to −20° F, use the ethylene glycol type antifreeze that you do dilute. FSN 6850-243-1992 gets you one gallon; FSN 6850-224-8730, five gallons; FSN 6850-243-1990, 55 gallons. Dilute it according to the instructions for your particular vehicle. Your TM'll tell you how much each vehicle takes for the temperatures you expect.



Keep close tabs on the weather temperature and oil pressure gages when you're operating to make sure they're in the normal range.

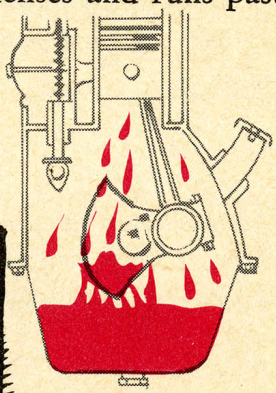


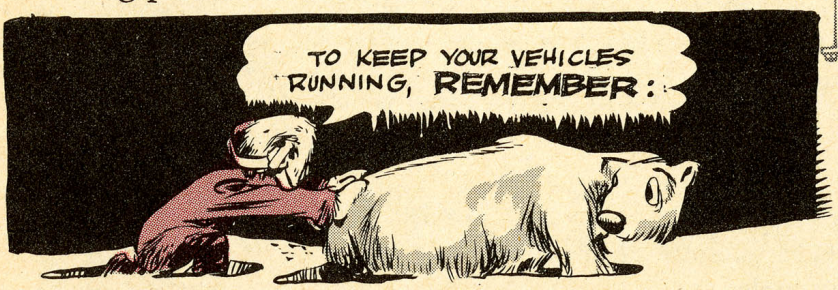
LUBRICATION SYSTEM

Old Man Winter plays havoc with everything, but he's 'specially hard on the various lubes, oils and greases on your track vehicles. Petroleum-type lube oils get hard when cold, which means the oil pumps slower through the tiny oil passages and has a harder time getting to tight places. Lube films on bearings and cylinder regions get like jelly and cause that metal-to-metal scuffing that's so hard on moving parts.

Cold weather increases the fluid friction of the oil on the engine cylinder walls and bearings so the engine won't crank. Lubes get heavy and gum up the power train bearings and gear teeth, causing friction and excessive wear. If the oil in the crankcase is too thick, the oil pump can't circulate it to the bearings.

Also, for every gallon of gas burned in the engine, a gallon of water is formed, which normally passes off through the exhaust and ventilating system as a vapor. But, when the cylinder walls are cold, the vapor condenses and runs past the piston rings and mixes in with the crankcase lubes forming a heavy sludge in the crankcase oil pans and oil screens. Valves, valve chambers and timing gear cases get so coated that lube can't reach the working parts.

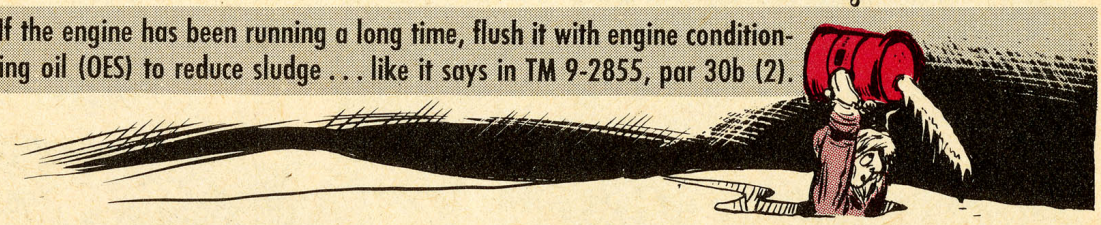




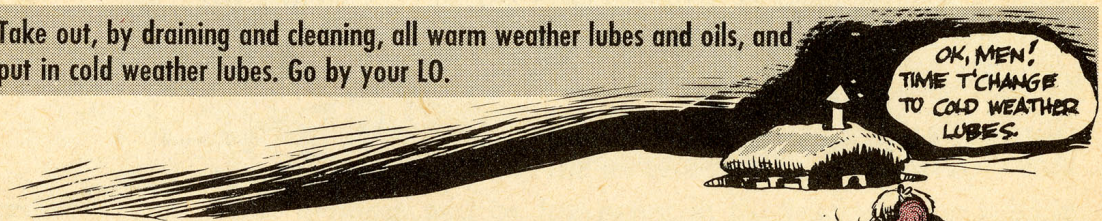
When you have to do the job, drain the crankcase oil immediately after operation, while the engine oil is still warm.

Drain and clean the oil filters as often as conditions require. Remember the LO is based on normal operation. Extremely cold weather is an unusual conditon, so go by the small print in your LO and change the oil oftener.

If the engine has been running a long time, flush it with engine conditioning oil (OES) to reduce sludge . . . like it says in TM 9-2855, par 30b (2).

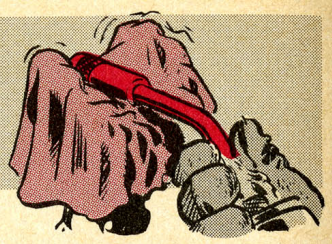


Take out, by draining and cleaning, all warm weather lubes and oils, and put in cold weather lubes. Go by your LO.

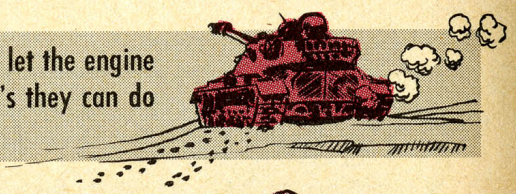


Keep your lube oils and greases stored in a warm place, if possible, so's they'll be easier to use when the time comes.

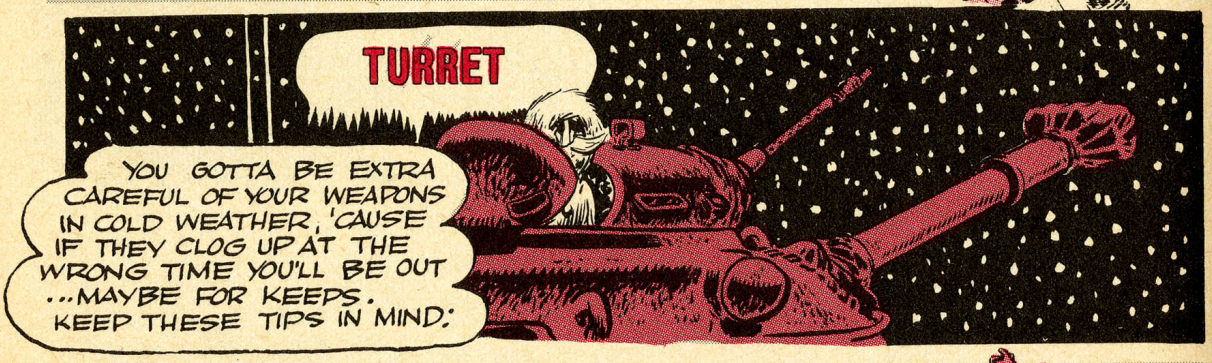
Take care to keep ice, snow, water and dirt out of the crankcase and hydraulic system when you're fillin' 'em. You can do this by wiping off all nozzles on lube containers and bein' real careful when you're pourin' or applyin'.



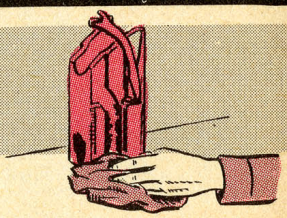
When you're ready to operate your vehicle, make sure you let the engine run at idle long enough to warm up the lubes and oils so's they can do their job.



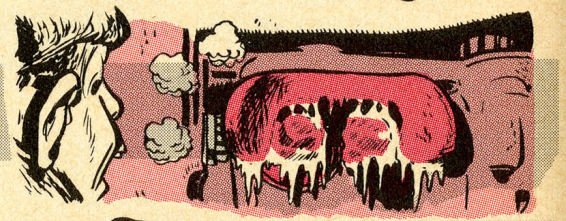
When starting your vehicle, make sure, too, you don't overprime, or else you'll let a lot of fuel into the crankcase, which'll thin out your lubes and possibly cause a crankcase explosion.



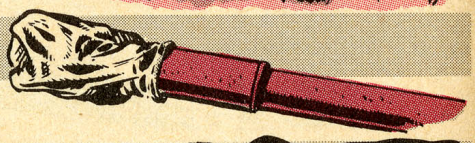
Strip and clean your weapons with mineral spirits to remove all lubes and rust preventive compound; then lube lightly with PL Special (above 0° F) or Lubricating Oil, weapons, LAW (below 0° F).



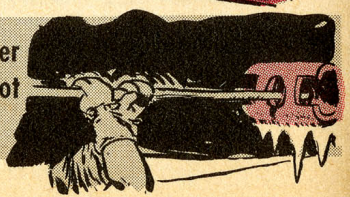
Be sure to keep snow and ice away from all working parts in the sights and gun barrel.



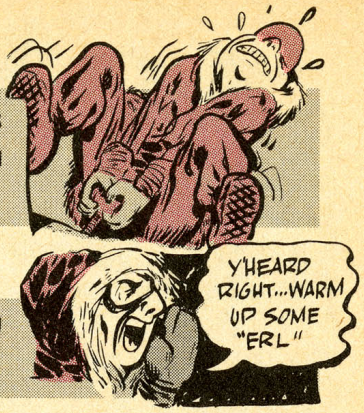
Use your muzzle and breech covers.



After firing, clean your gun real good with bore cleaner; clean it right after firing and for three consecutive days afterwards, to make sure you've got all the "potato salts" out of the gun pores.

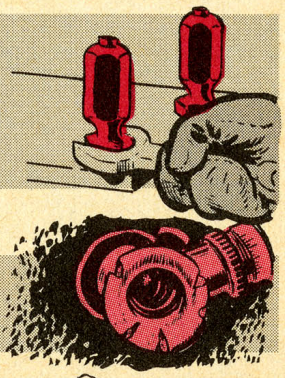


If any parts get frozen, don't try to force 'em to work. Just warm the parts slightly and move 'em gradually till they work. You may have to use a little kerosene or gun oil. A little glycerin'll do the trick, too.



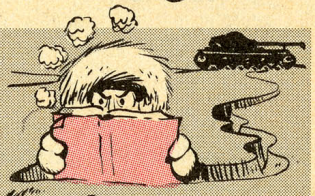
If you've got ice in your barrel, you can remove it with warm oil if you can't get it out by regular thawing.

Check the turret oil gears daily for condensation. If the oil level seems to rise, you've got condensation forming and collecting in the oil reservoir. If this happens, drain the reservoir and refill with clean OHA or OHC. They're interchangeable and can be mixed.

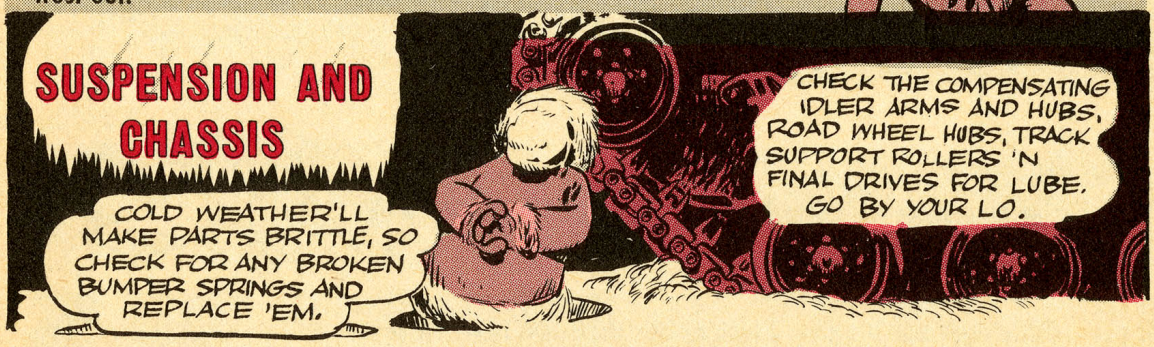


Check all rubber and plastic parts for cracks and breaks, 'specially the rubber gunner's handles, eye pieces and boots.

Here's one to watch carefully: On the .50-cal machine gun, LO 9-7010 says to use PL Med daily in the oil buffer, but if you do, you'll jam up the works. 'Stead, go by TM 9-2021, which says to take out all oil from the oil buffer. See LO 9-U7 for how to lube the gun.



If the chamber in the barrel gets frosted, the round won't be seated properly and your weapon'll jam. Avoid this by using a little gun oil to keep the frost out.

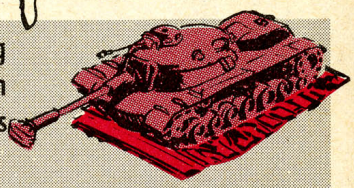


Try to keep snow from piling up around the sprocket. You can do this by avoiding sudden turns while driving, and by following in the tracks of the vehicle ahead of you; that way only the first vehicle'll run the chance of having the tracks slip off.

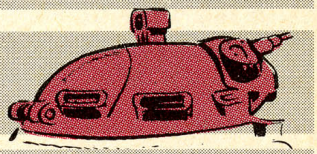
Make sure your tracks are adjusted right, too, and the best time to do the job is after a short run when they're limbered up a little.

A FEW EXTRA TIPS

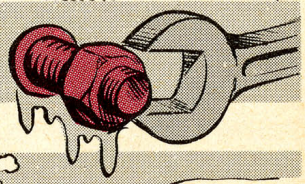
Keep all tracks free from caked snow and ice, and keep 'em from freezing to the ground by parking your vehicle on wooden planking or brush. Clean out all the snow from behind the track support rollers (if your vehicle has 'em) to keep 'em from freezing.



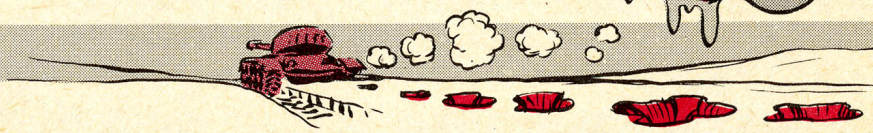
Check to see that all doors, hatches, caps and other openings are secure to keep snow out.



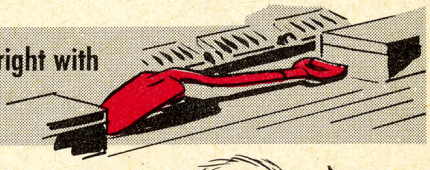
Inspect and tighten all nuts, screws, and bolts, 'cause extreme cold'll cause contraction of metal parts.



Check for leaks.



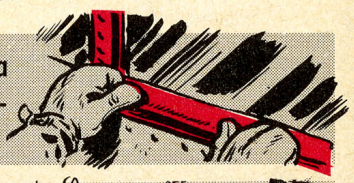
Check to see that all your OVM, particularly shovels and such, is right with the vehicle, where it should be.



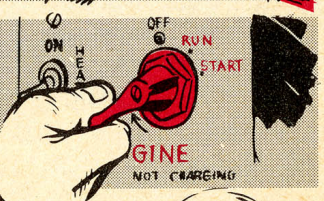
Keep your optics from wind and weather by using the covers that go with 'em; never take 'em inside to a warm room, or condensation'll set in. And, too, when you take 'em out in the cold again, they may crack.

If possible, when you park your vehicle for any length of time, try to park on high ground, with the engine away from the wind. That way, you'll give your engine a better chance of starting.

On Weasels and others, keep from breaking the windshields by putting a 2-in strip of tape along the bottom edge, and by never pointing the defroster directly at the windshield.

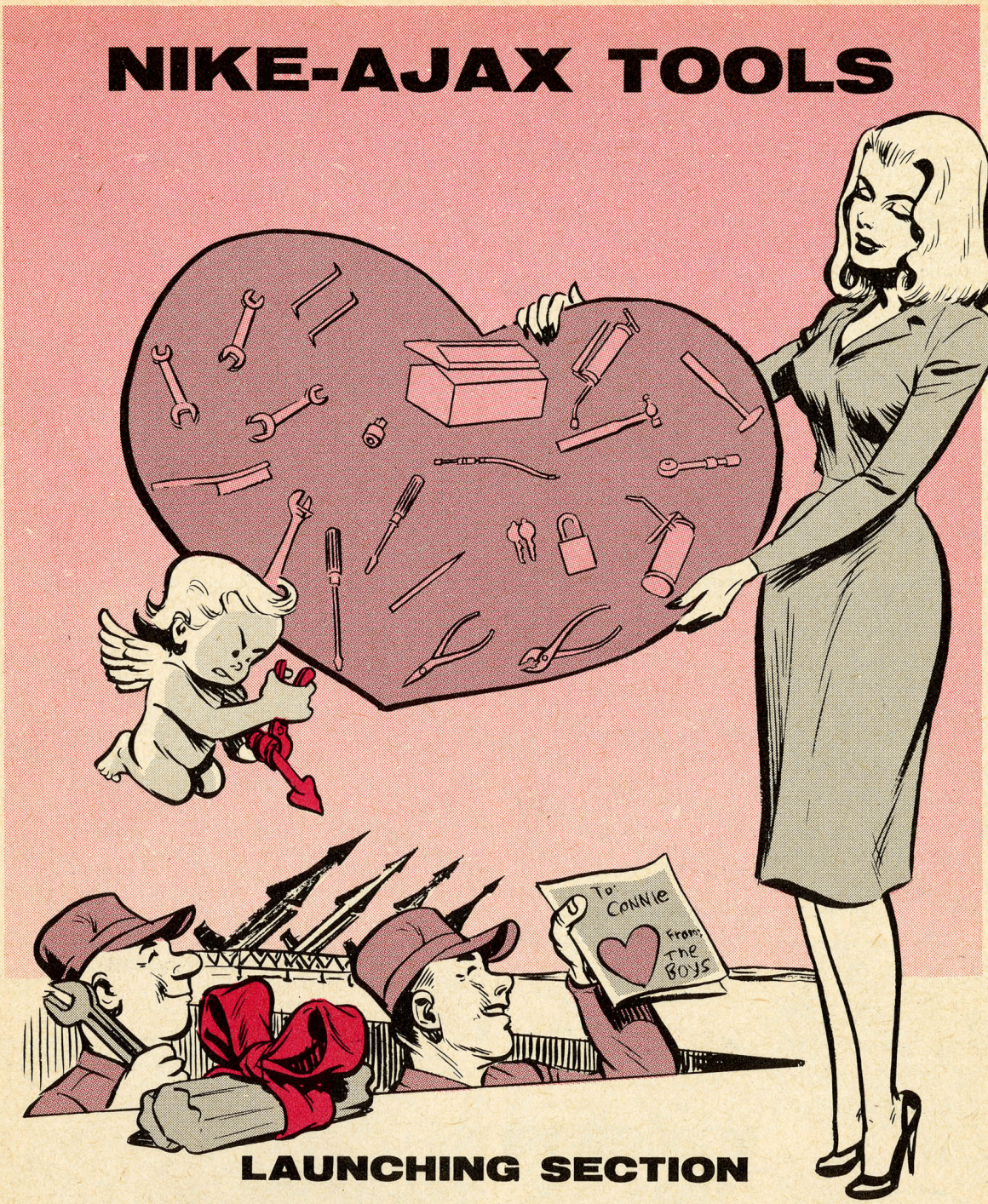


If your vehicle's got one, it's a good idea to start the auxiliary engine first, before starting the main engine. This'll be less strain on your batteries and will also let the heater on your auxiliary engine help warm up the main engine.



SEE TM 9-2855 (JAN 51) AND THE SECTION, "OPERATION UNDER UNUSUAL CONDITIONS," IN YOUR VEHICLE'S TM FOR OTHER COLD WEATHER INFO.

NIKE-AJAX TOOLS



LAUNCHING SECTION

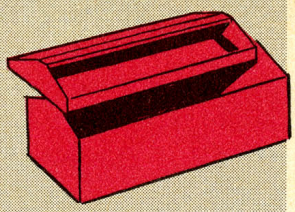
A launching section at a Nike-Ajax site is only as good as the tools it has to work with. And to be working on all cylinders, you need the right tool set.

To make a long story brief, you want

Tool Set, Organizational Maintenance, Launcher Loader, Guided Missile (Nike), FSN 5180-545-8641, SM 9-4-5180, J7-18.

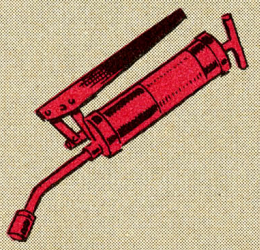
Each launching section gets a tool set. All items are Ordnance unless otherwise marked.

BOX, TOOL: S, loose tray, approx 7 5/16 x 8 1/2 x 21 in (Ord TAC dwg 07573-Y).



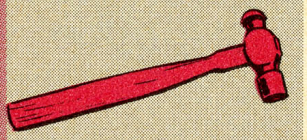
1 Auth **FSN 5140-357-5483**

GREASE GUN, HAND: lever operated, 15 oz cap, 7000 psi max pressure w/one 6 in lg rigid bent angle tu type extn, w/hyd type coupler (MIL Spec MIL-G-3859).



1 Auth **FSN 4930-223-3391**

HAMMER, HAND: machinist's ballpeen, 1/2 lb (Fed Spec GGG-H-86, Type L, Class I).

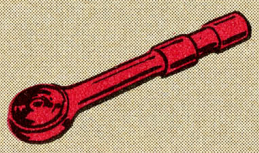


1 Auth **FSN 5120-242-3913**

HAMMER, HAND: blacksmith's dble face, 10 lb (Fed Spec GGG-H-86, Type SA, Class II).

1 Auth **FSN 5120-243-2957**

HANDLE, SOCKET WRENCH: rtc, geared hd, rvrs, 3/8 in sq-drive, 6 in lg (Fed Spec GGG-W-641, Type VI, Class 1).



1 Auth **FSN 5120-240-5364**

HOSE ASSEMBLY, GREASE GUN: hyd type, 3/16 in ID, 12,000 psi burst pressure, 10,000 psi rated working pressure, 14 in approx lg over-all, 1/8 in NPT male end connection (Alemite Div of Stewart-Warner Corp, No 6652-A, or equal).

1 Auth **FSN 4930-204-2295**

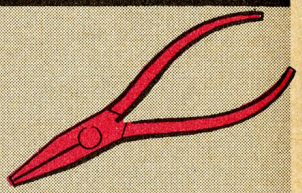
OILER, HAND: 5 oz cap, force fed by int pump, body & spout tin pl, 1 7/8 in dia body, 5 in lg spout, female thd bottom end, 1 1/2 in dia of thd, w/removable tip (Fed Spec RR-O-376, Type II, Class B).

1 Auth **FSN 4930-274-5713**

PADLOCK: pin tumbler mech, br case, cd fin shackle, 1 3/4 in w, 1 7/16 in h, keyed individually, w/o clevis, w/2 keys (Fed Spec FF-P-101, Type EPB).

1 Auth **FSN 5340-205-5517 (ENG)**

PLIERS: side cutt, lg rd nose, w/cutter, 6 in lg (Fed Spec GGG-P-471, Type P).



1 Auth **FSN 5120-247-5177**

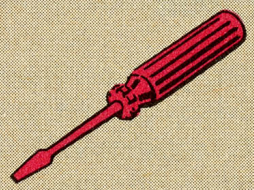
PLIERS, SLIP JOINT: stght nose, comb, w/cutter, 8 in lg (Fed Spec GGG-P-471, Type F, Class I, Style 1).

1 Auth **FSN 5120-223-7397**

PUNCH, DRIVE PIN: taper type, 5/16 in dia pt (Fed Spec GGG-P-831, Type VIII, Class C).

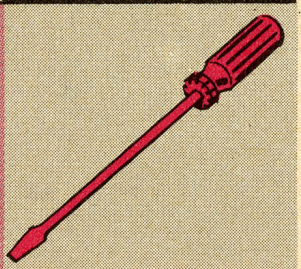
1 Auth | FSN 5120-222-1906

SCREWDRIVER, FLAT TIP: plastic hdl, w/bolster & wrench grip, 4 in blade, 1/4 in tip (Fed Spec GGG-S-121, Type I, Class 5, Style 1, Design B, Shape B).



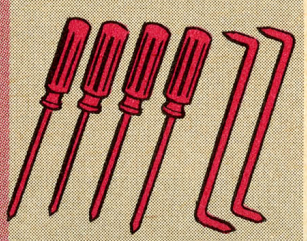
1 Auth | FSN 5120-278-1282

SCREWDRIVER, FLAT TIP: w/wrench grip, plastic hdl, flared tip, 3/8 in w, 12 in lg blade (Fed Spec GGG-S-121, Type I, Class 5, Style 1, Design B, Shape B).



1 Auth | FSN 5120-227-7362

SCREWDRIVER SET, RECESSED SCREW: (Phillips type) 4 comm & 2 offset screwdrivers (Fed Spec GGG-S-121).

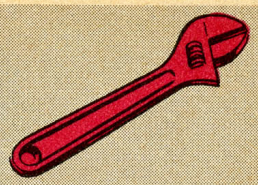


1 Auth | FSN 5120-357-7174

SOCKET, SOCKET WRENCH: 3/8 in sq-drive, 12 pt, 1/2 in opng (Fed Spec GGG-W-641, Type I, Class 1).

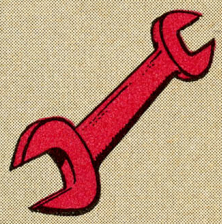
1 Auth | FSN 5120-237-0977

WRENCH, OPEN END ADJUSTABLE: sgle-hd, 15/16 in jaw opng, 8 in lg (Fed Spec GGG-W-631, Type I).



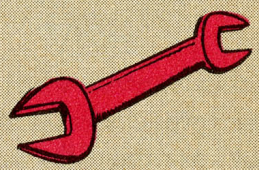
1 Auth | FSN 5120-240-5328

WRENCH, OPEN END, FIXED: 15 deg angle, dble-hd, spear-hd, alloy-S, 1/2 and 9/16 in openings, 17/64 in thk hd, 5 1/2 in lg (Fed Spec GGG-W-636, Type IV).



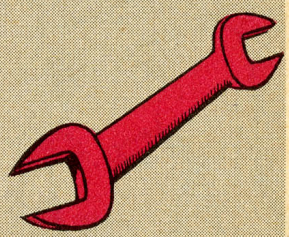
1 Auth | FSN 5120-187-7124

WRENCH, OPEN END, FIXED: 15 deg angle, dble-hd, spear-hd, alloy-S, 9/16 and 5/8 in openings, 19/64 in thk hd, 6 in lg (Fed Spec GGG-W-636, Type IV).



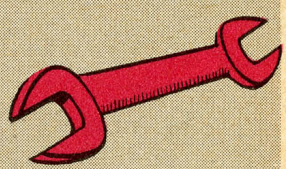
1 Auth | FSN 5120-187-7126

WRENCH, OPEN END, FIXED: 15 deg angle, dble-hd, spear hd, alloy-S, 5/8 and 11/16 in openings, 7 in over-all lg, 21/64 in thk of hd (Fed Spec GGG-W-636, Type IV).



1 Auth | FSN 5120-277-8301

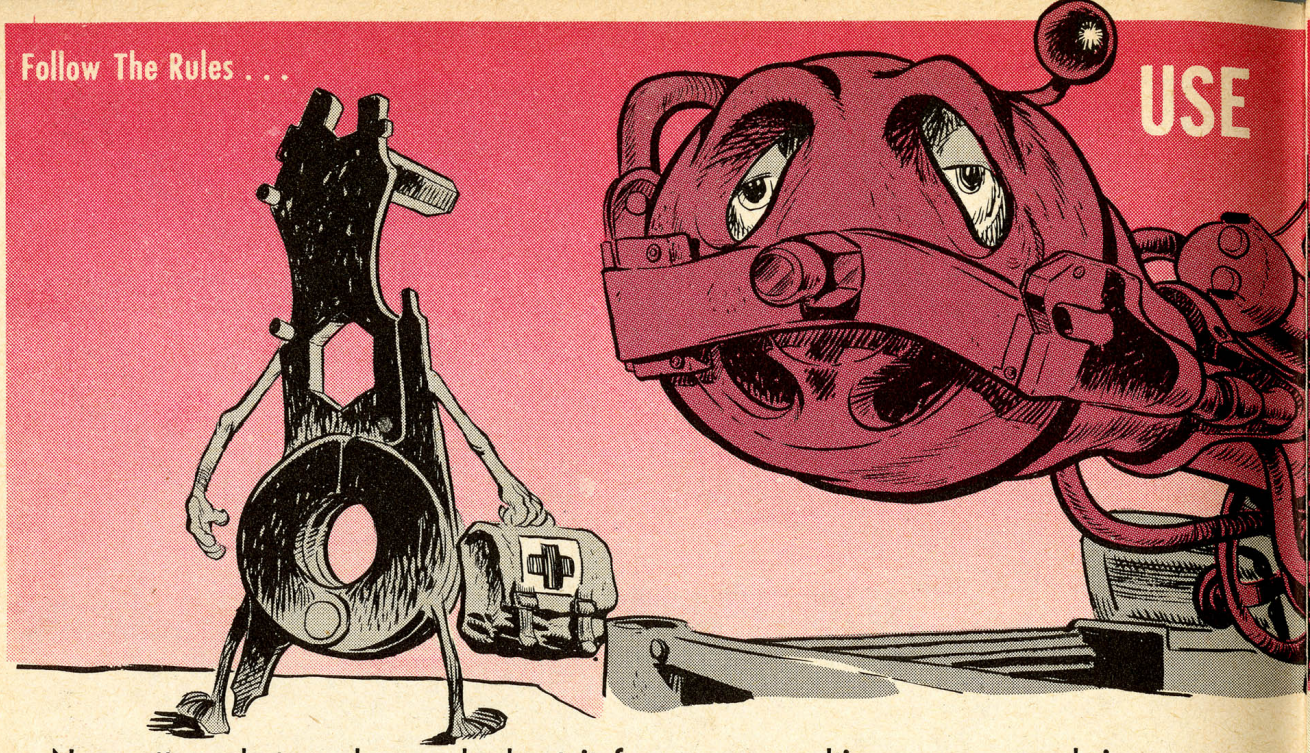
WRENCH, OPEN END, FIXED: 15 deg angle, dble-hd, spear-hd, alloy-S, 5/8 and 13/16 in openings (Fed Spec GGG-W-636, Type IV).



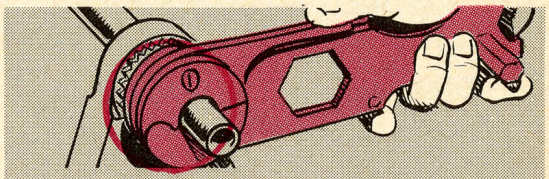
1 Auth | FSN 5120-357-8464

BRUSH, WIRE SCRATCH: curved hdl, rocker rect face, Style No. 7, 14 in lg (Fed Spec H-B-178, Type II).

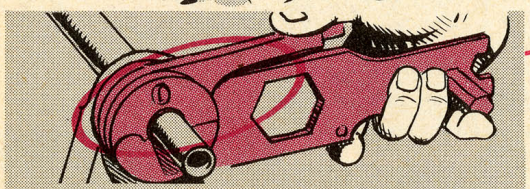
2 Auth | FSN 7920-223-7647



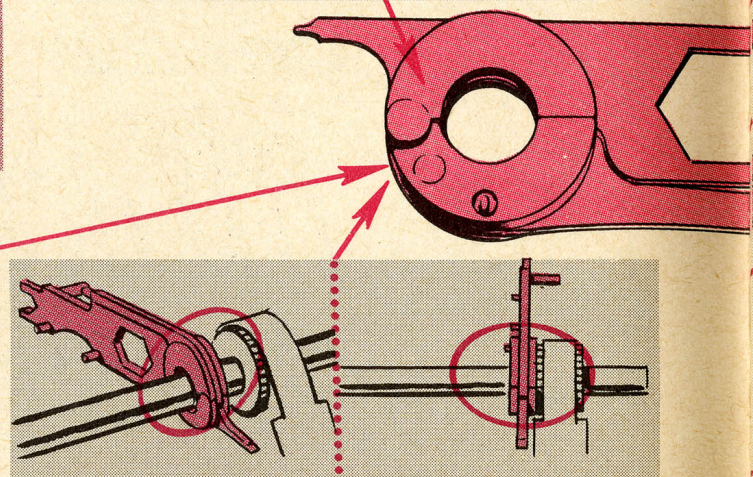
No matter what angle you look at it from, your multi-purpose wrench is a real piece of machinery when it comes to working around your M8 or M8C .50-cal spotting rifle and the M40A1 or M40A1C recoilless rifle. The same goes for the combination tool that's used with the spotting rifle only.



Adjust the elevation cam by slipping the wrench around the barrel like so and with the nib facing the cam.

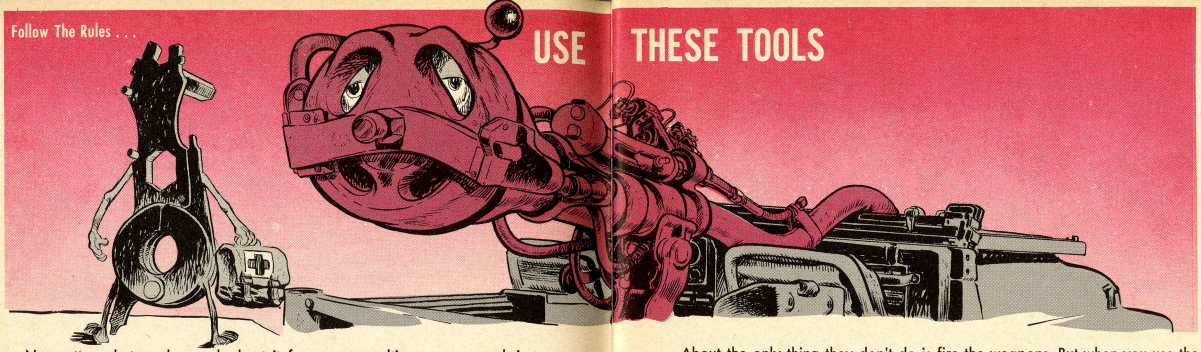


Keep the wrench open far enough so's you can get it over the springs and the nib into the notch. When you squeeze, the spring will be pushed down, letting you make a right or left adjustment.



The azimuth adjustment works the same . . . except, of course, you move to the other side of the front mounting bracket.

USE THESE TOOLS



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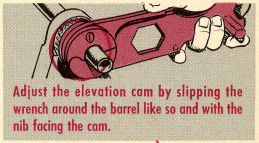

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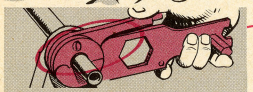

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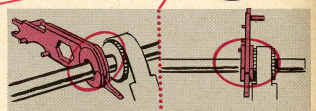

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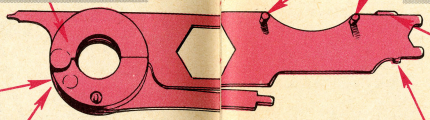
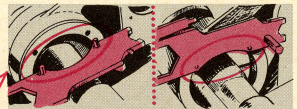
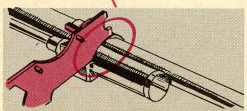


About the only thing they don't do is fire the weapons. But when you use the tools the way they want to be used, the odds are the rifles won't let you down.

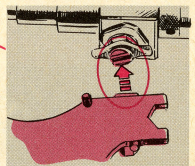
When you compare the tools, you see that they have the same use in a couple places.



Ordnance uses this part of the tool to loosen and tighten the alining pad spring retaining ring.

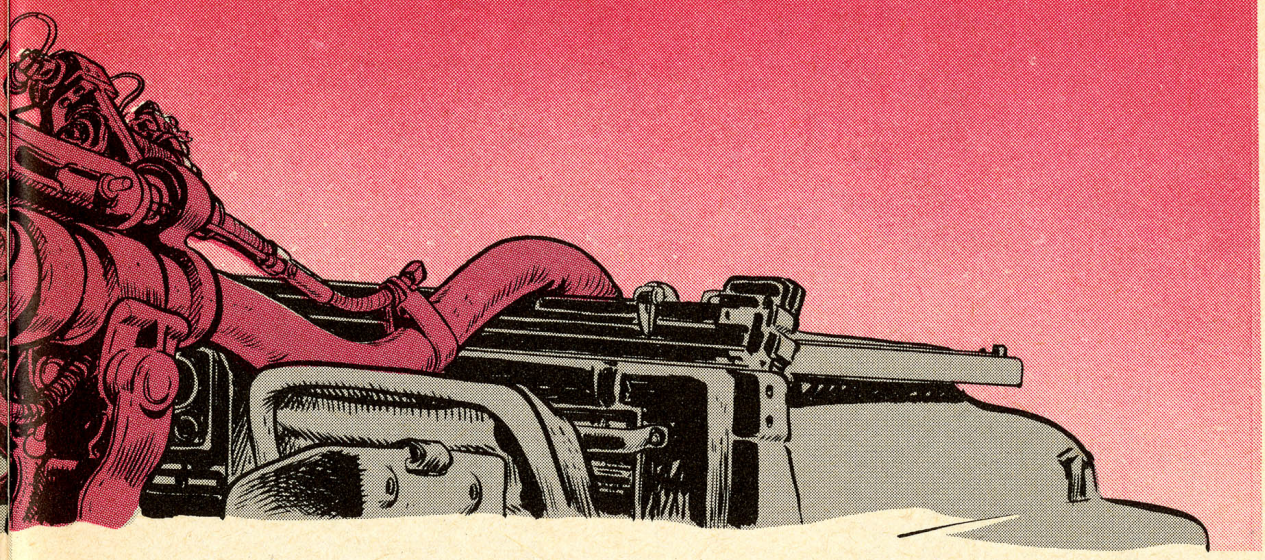


You use this part of the tool to adjust the gas cylinder.



For loosening and tightening gas regulator needle.

THESE TOOLS



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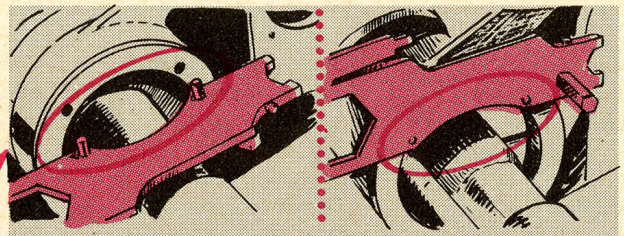
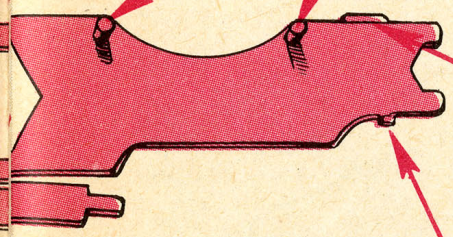
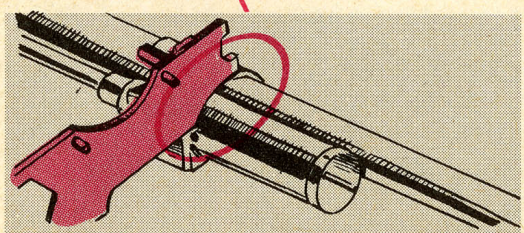


Ordnance uses this part of the tool to loosen and tighten the alining pad spring retaining ring.





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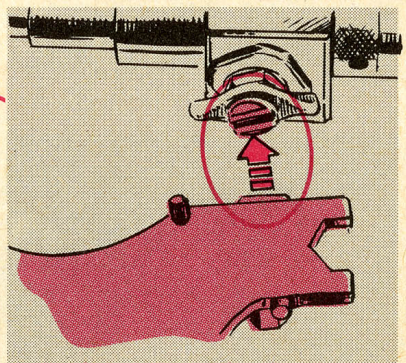
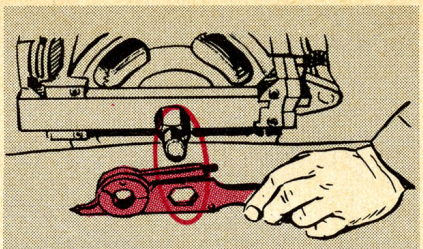
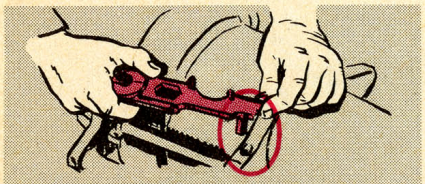


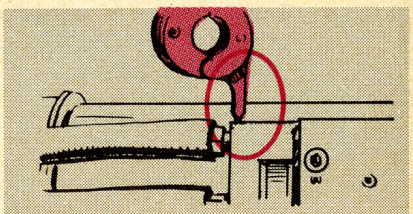
For loosening and tightening gas regulator needle.



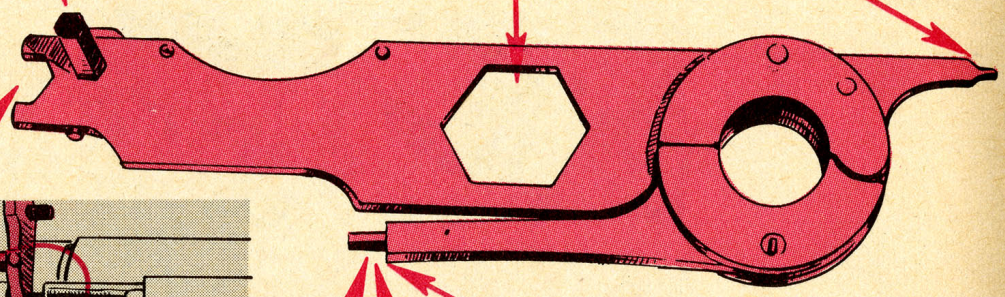
This part of the tool is used to work on the firing pin housing cap.

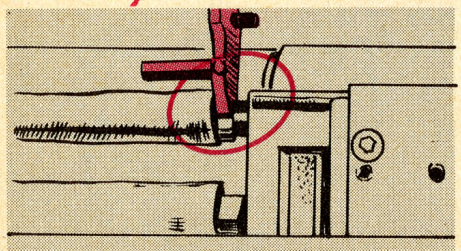


Use this part to remove the hex socket bolts from the carrying handles.

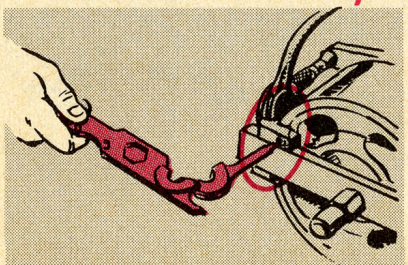


This part is for Ordnance to work on the adjusting cable locking screws.

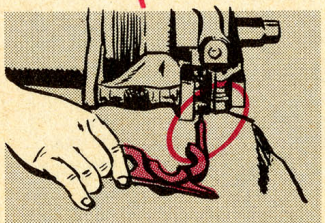




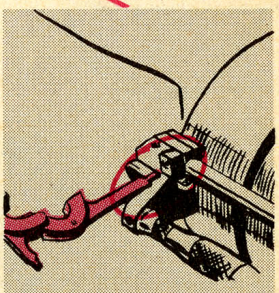
Ordnance uses this end to work on the firing cables.



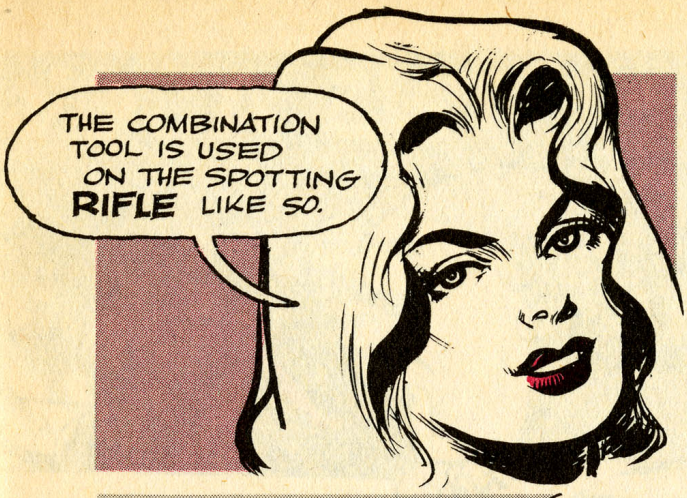
You tighten these hex socket bolts with this end of the tool.

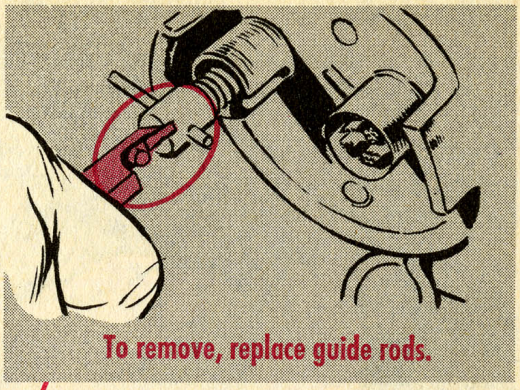


These hex socket bolts are worked over with the same end of the tool....

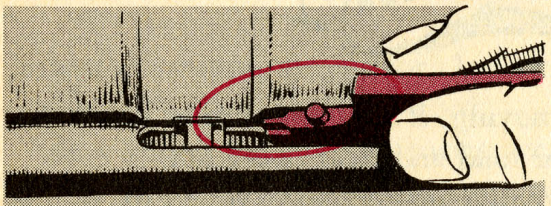


And so is this bolt.

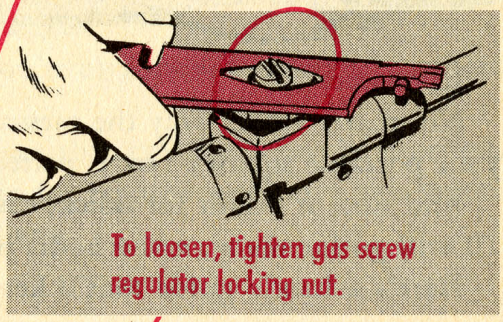




To remove, replace guide rods.

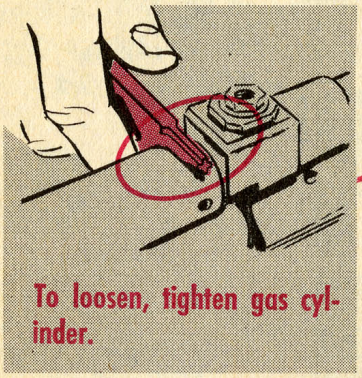


Ordnance also uses this part to squeeze the operating rod springs so the operating rod assembly can be installed with the operating rod plunger set over the spring stop on the barrel.

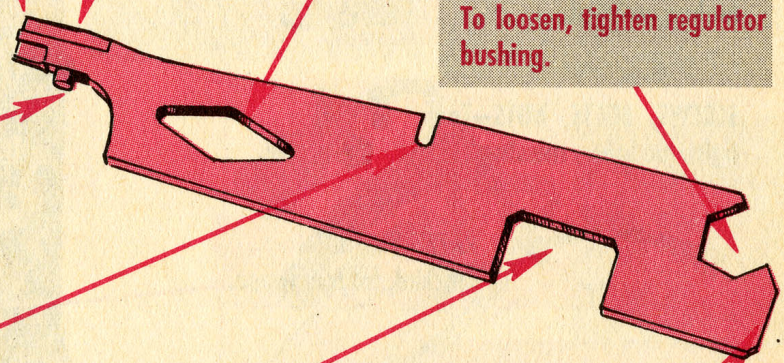


To loosen, tighten gas screw regulator locking nut.

To loosen, tighten regulator bushing.



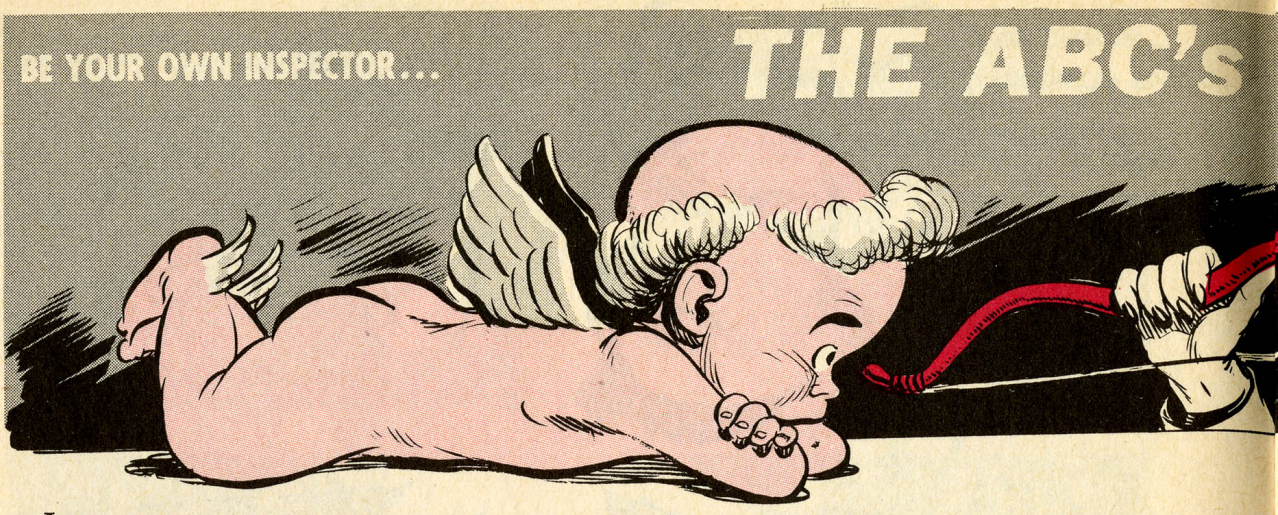
To loosen, tighten gas cylinder.



For removing sear release.

To loosen, tighten lock ring bushing.

To loosen, tighten gas screw regulator.

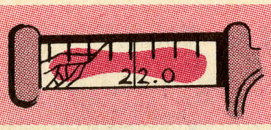


In or out.

No matter which way the message is moving, it's mighty nice to know that your portable squawk box is netted in for loud and clear operation.

And since it's built for quick, easy preventive maintenance, your PRC 8, 9 or 10 will go for many, many hours in return for a few minutes of care.

Here's a handy guide that'll keep you on frequency every time—whether the



DIAL WINDOW—Cracked, scratched, broken, dirty.

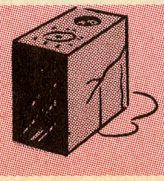
ANTENNA INSULATOR—Dirty, broken, painted.

SCREWS, BOLTS, NUTS—Too tight, too loose, missing.

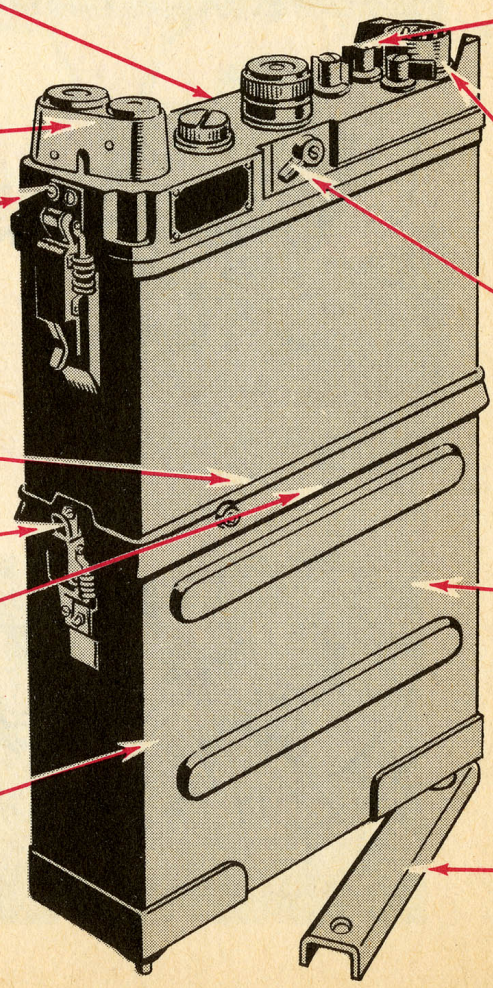
BATTERY CABLE—Cracked, frayed, loose.

CLAMPS—Loose, bent, fail to make tight connection.

BATTERY PLUG—Prongs dirty, bent.

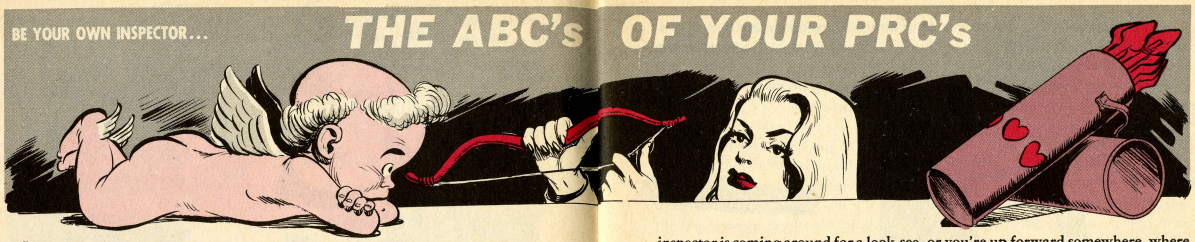


BATTERY—Weak, cracked, leaking.



BE YOUR OWN INSPECTOR...

THE ABC's OF YOUR PRC's



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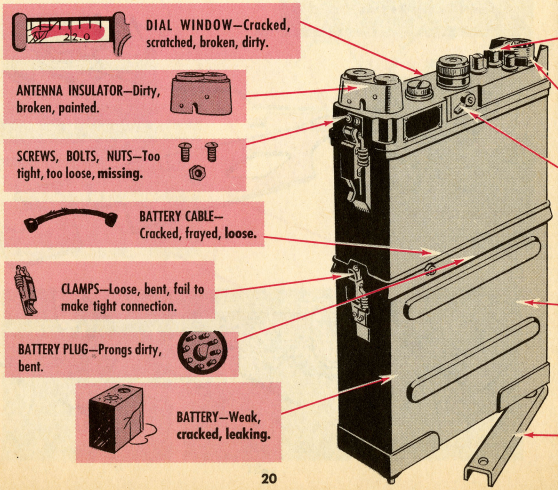
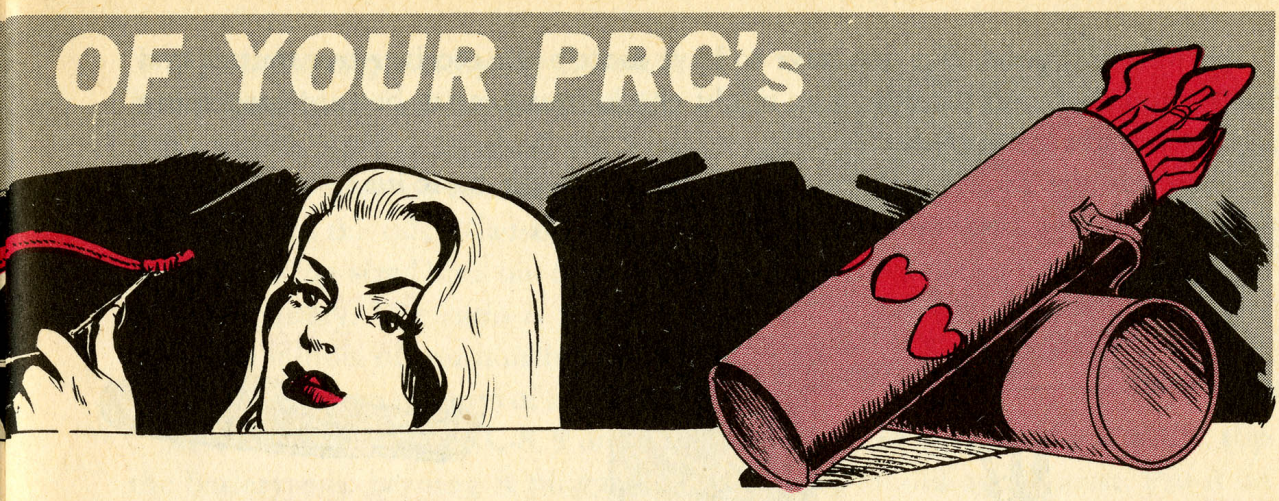
Here's a handy guide that'll keep you on frequency every time—whether the inspector is coming around for a look-see, or you're up forward somewhere, where a man can't afford to miss a word.

As y'know, **major** deficiencies are the ones that call for immediate action. If your radio has a major deficiency, turn it in for repair soonest. On this guide, these major deficiencies are shown in **Bold Type.**





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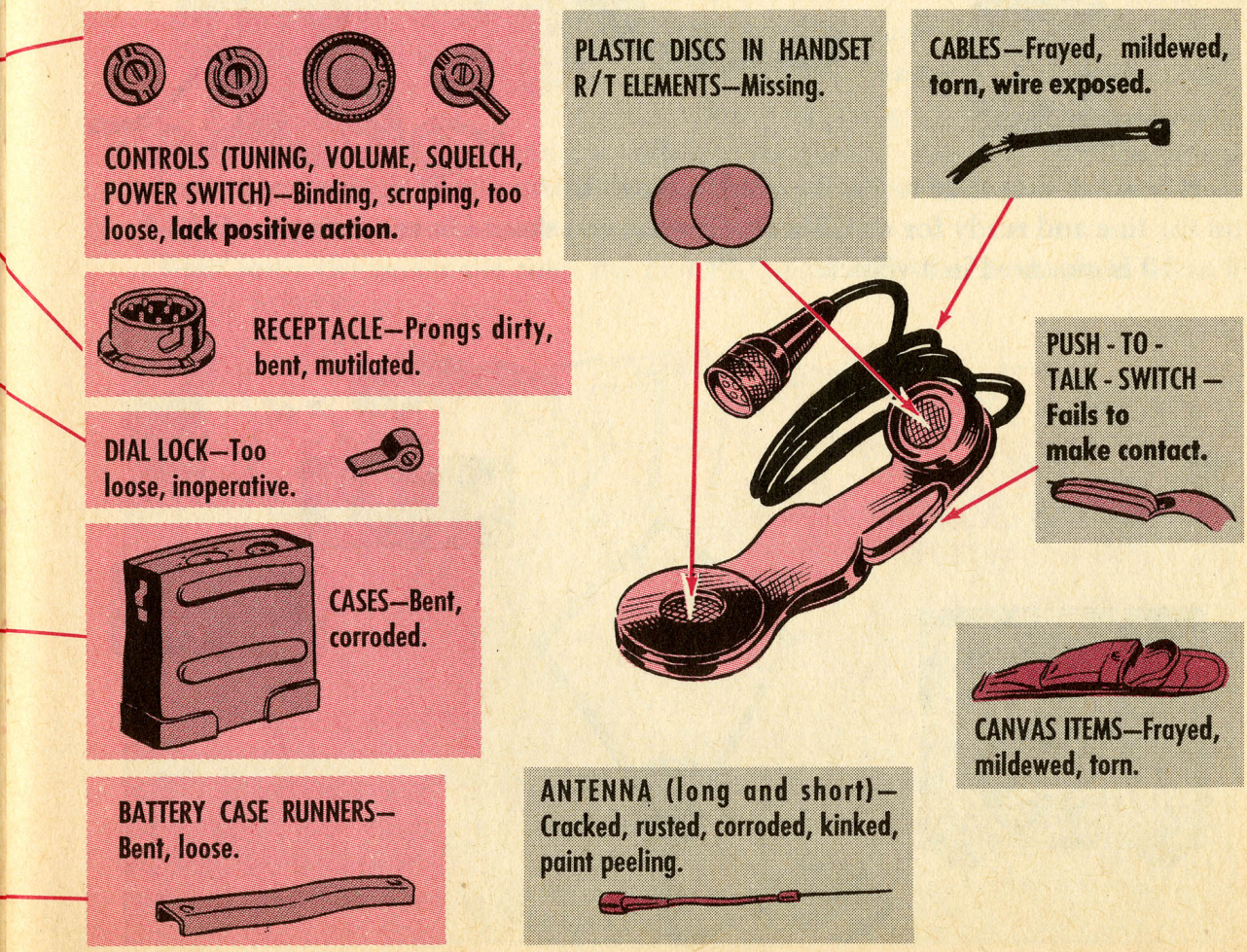


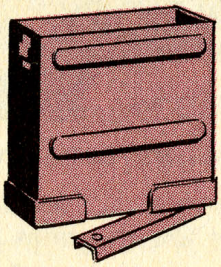
All well and good. But you have to have more'n the receiver-transmitter and battery to make with the talk. You might check your gear to be sure everything is present and accounted for.

These are the so-called Operating Components—the basic items needed to go on the air with a pack-mounted PRC-8 through 10:

ANTENNA AT-272A/PRC (short)

ANTENNA AT-271A/PRC (long)

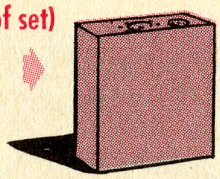
CASE CY-744A/PRC or CY-744/PRC



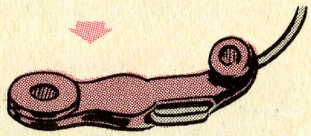
BAG CW-216/PR or BAG CW-216A/PR

BELT SUSPENDERS M-1945

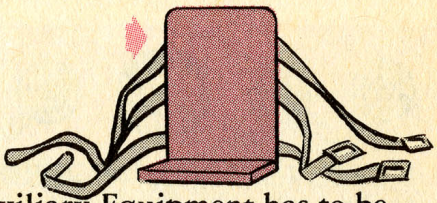
BATTERY BA-279/U (required but not supplied as part of set)



HANDSET H-33B/PT



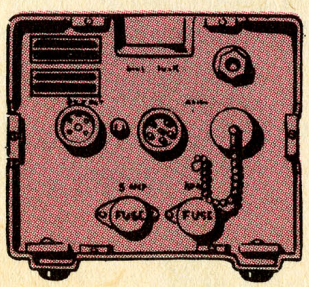
CARRYING HARNESS ST-120A/PR or ST-120/PR

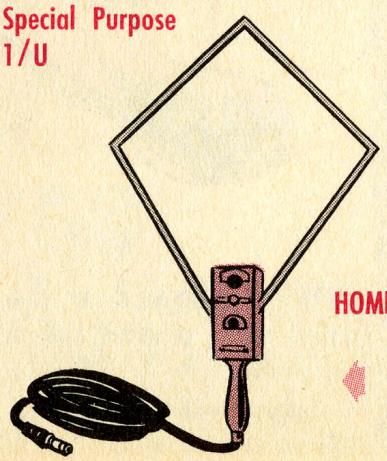


When it comes time to hit the road, a batch of Auxiliary Equipment has to be on the line and ready for use. These are what you should have when your PRC-8, 9 or 10 is mounted in a vehicle:

CONTROL GROUP AN/GRA-6
Local Control C-434/GRC
Remote Control C-433/GRC

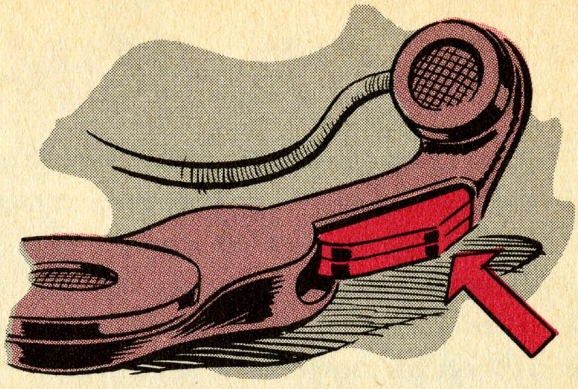
AMPLIFIER-POWER SUPPLY AM-598/U
Mounting MT-759/PRC Accessory Case CY-1210/U. Electrical Special Purpose Cable Assembly CX-2031/U



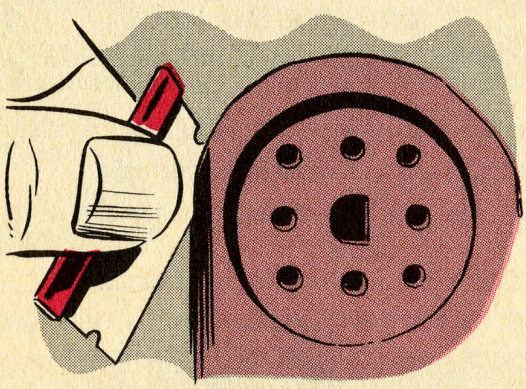


HOMING ANTENNA AT-339/PRC or AT-340/PRC or AT-249/GRD.
Note: To increase range, antenna equipment RC-292 may be used.

If your finger gets itchy, try to scratch it on something besides the Push-To-Talk switch on the handset. Hit that switch only when you're actually ready to make with the talk. 'Cause transmitting takes king-sized bites out of the life of your battery. The ratio is about 10 to 1. One minute of transmitting drains as much life as ten minutes of receiving.



And any time your PRC-8, 9 or 10 is going to be out of action for a while, slip the battery out. Leaving it plugged in will bring on old age soonest. Put it on the shelf until the set is needed again.

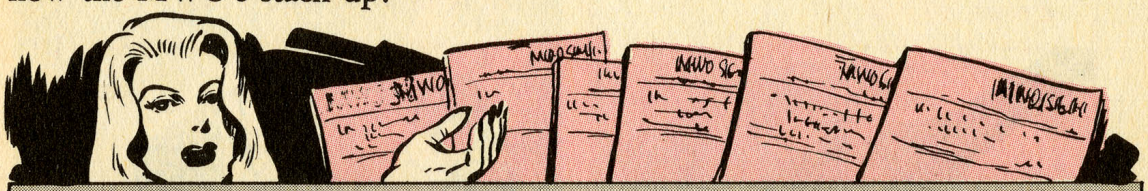


Incidentally, there've been stories around that the connection 'twixt battery plug P1 and the socket of the battery isn't as snug as you'd like. Leads to what the experts call "intermittent operation." In other words, sometimes you get juice and sometimes you don't.

It usually happens because the cardboard jacket gets in the way—by not giving the plug enough clearance to slip into the socket. The cure? Just cut away a small circular slice of the cardboard so the opening is 1⅜ inches in diameter.

That way, you can slip your plug in with no sweat.

Been some changes made since the first PRC-8, 9 and 10's hit the field. Here's how the MWO's stack up:



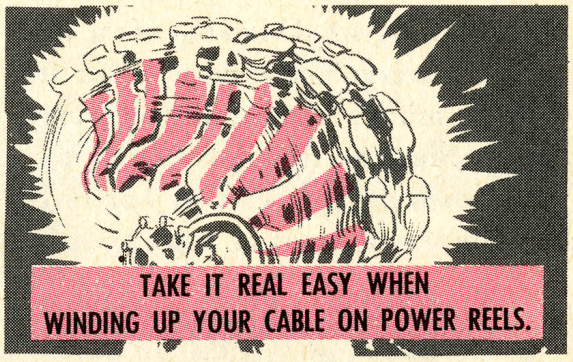
MWO SIG 11-612-2	1 July 58 —	Replaces antenna jacks J1 and J2.
MWO SIG 11-612-3	19 Nov 56 —	Prevents damage to dial pointer adjusting mechanism.
MWO SIG 11-612-4	10 Jan 57 —	Eliminates sources of frequency drift.
MWO SIG 11-612-6	27 June 58 —	Installs a temperature compensating capacitor in the transmitter oscillator stage and maintenance spare transmitter oscillator subassemblies.
MWO SIG 11-612-7 (with Changes 1)	16 Nov 54 —	Prevents battery drain during retransmission operation in early production AN/PRC-9's and 10's.
MWO SIG 11-4065-1	17 Feb 58 —	To prevent the runners from becoming disengaged from the battery case.

GOOD CONNECTIONS

A lot of communications and wire men can tell you that traffic is mighty heavy in the Spiral 4 cable and connector cemetery these days.

It's the old story—with a simple plot.

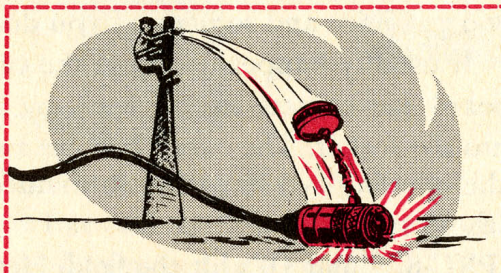
Those brass connectors are getting knocked out of action almost every day. Real short life, sometimes. A little drop of three or four feet can be fatal. Or a sharp bang against any hard surface. Anything that changes their shape enough to prevent a watertight connection.



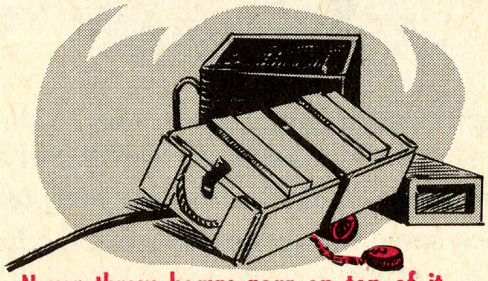
TAKE IT REAL EASY WHEN WINDING UP YOUR CABLE ON POWER REELS.

And a dead connector adds up to a twin-killing—since the attached ¼-mile reel of cable goes to the graveyard along with it. Reel buddies to the end.

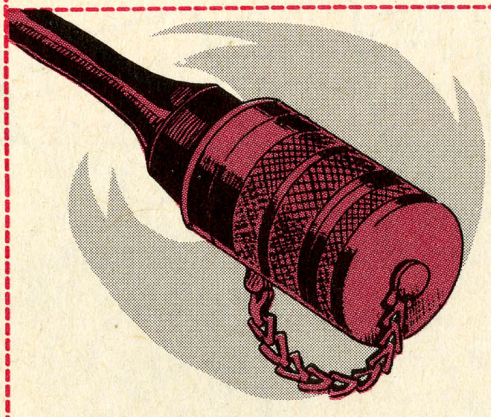
To guarantee a good connection when you need it the most, handle the connector gentle-like.



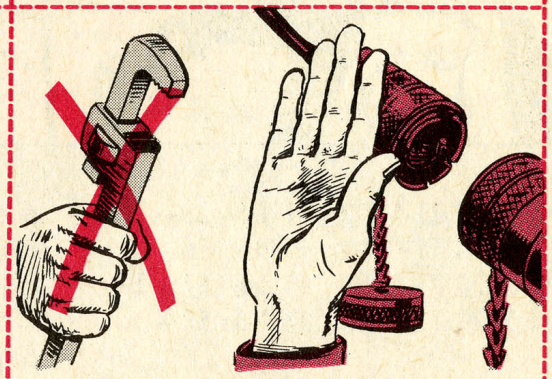
Lay it on the ground instead of dropping it down.



Never throw heavy gear on top of it.



Leave the protective cap in place until the connector is to be hooked up.

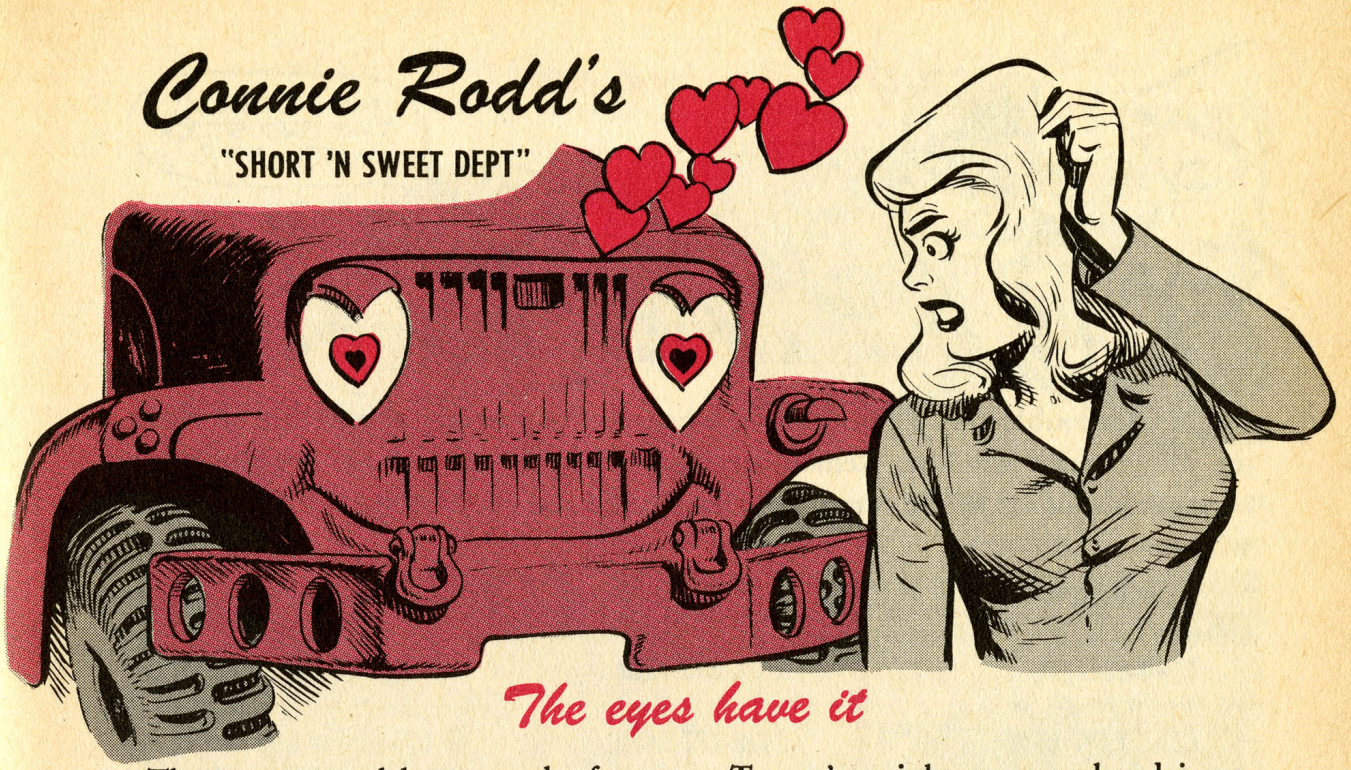


And when you're hooking two cables together, use only your hands to do the job. Wrenches or straps are strictly NG.

Handling a connector with these few tips in mind will give you a live-wire operation, and get the message through every time.

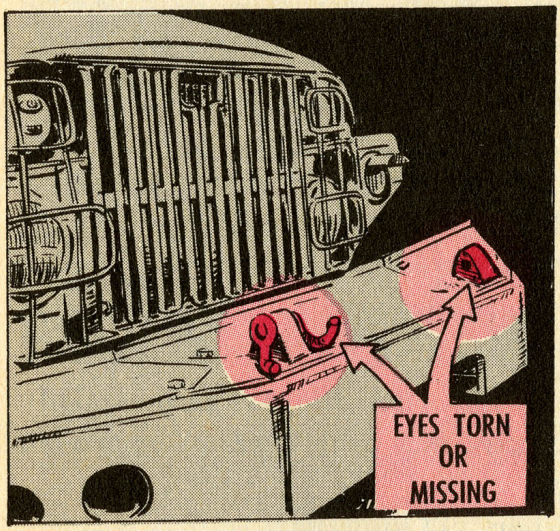
Connie Rodd's

"SHORT 'N SWEET DEPT"



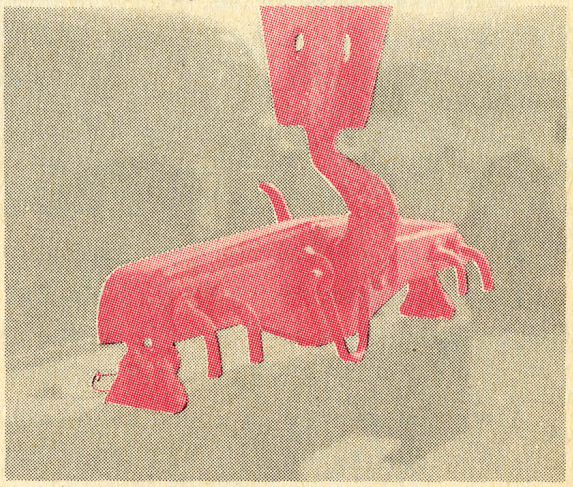
The eyes have it

Those two metal loops on the front bumpers of your M-series wheeled vehicles are called lifting and towing eyes. Like the name says, they're needed when a truck has to be lifted for towing or recovery by a wrecker.

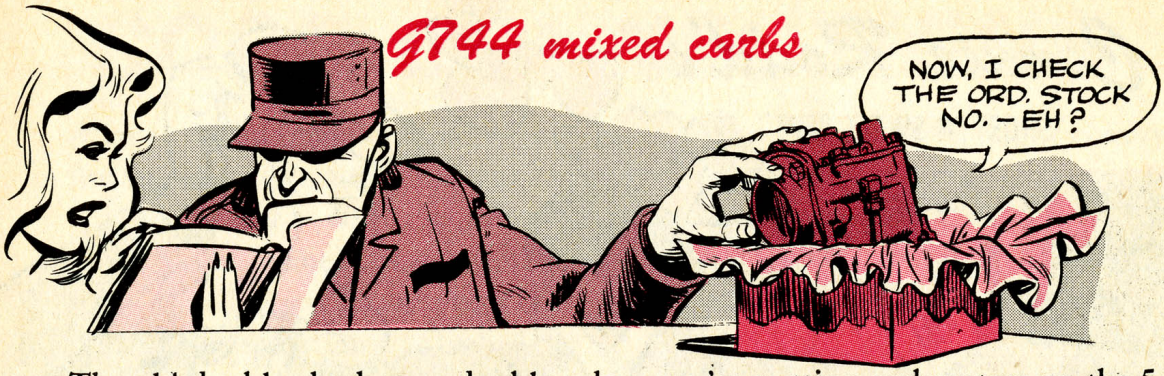


Seems to be a lot of trucks running around without their eyes or with just one. They've been ripped off, probably because they weren't used with the right tool.

To use 'em right, you wrecker drivers have to use a bar hoisting assembly. Up to now, it's been pretty rough getting. But, they're coming into supply, and you should be able to requisition yours under FSN 3940-347-9703.



If you don't have one, tell your supply people. If they haven't received them yet, park yourself on their doorsteps until they squawk to higher echelon, who in turn will take the problem up with the people at the depot.



The old double-check goes double when you're putting carburetors on the 5-ton G744-series vehicles. Remember that the carbs you can get **are not interchangeable** in all G744 5-ton vehicles. Here's the run-down on what carbs go where:

CARBURETORS	FSN	USE ON
Ordnance Stock No. G744-8327282	2910-832-7282	M62 and M246 wreckers
G744-7375469	2910-737-5469	All G744 5-ton trucks **except** the M62 and M246 wreckers
G744-8331877 **with the governor spring** (FSN 2990-696-0283) **that came with it**	2910-562-0441	All G744 5-ton trucks **except** the M62 and M246 wreckers
G744-8331877 **with the governor spring** 8327323 (FSN 5340-200-5415) **only**	2910-562-0441	M62 and M246 wreckers

When you use these carbs, there are three important things to keep in mind:

You requisition the carbs by FSN, but identify them by the Ordnance Stock No. on the carburetor. FSN's aren't on the carbs.

Carbs G744-8327282 and G744-7375469 **are not interchangeable.**

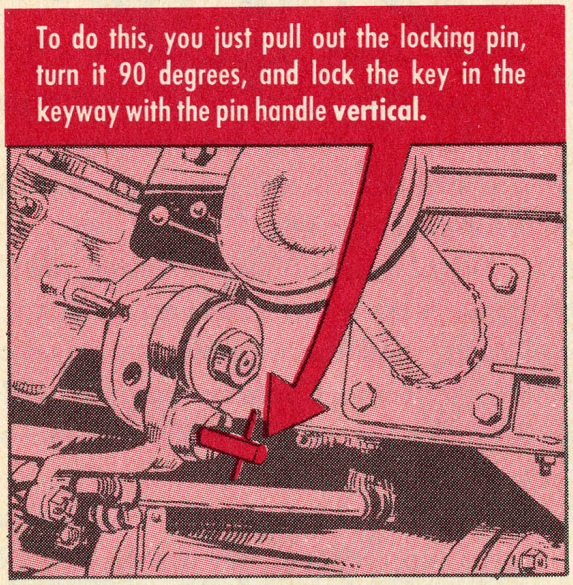
After the supply of carbs G744-8327282 and G744-7375469 is exhausted, you'll get carb G744-8331877 (FSN 2910-562-0441). That's when you have to be careful about which spring is in the governor. When you get carb G744-8331877 and you're in doubt which governor spring it has, just ask your support unit. They'll open the governor and inspect the spring. They'll be able to recognize the 5340-200-5415 governor spring 'cause it's painted yellow.

You have to have the right governor spring for your carb to get the right RPM from your engine. If you don't have the correct spring, then it's up to your support unit to install it.

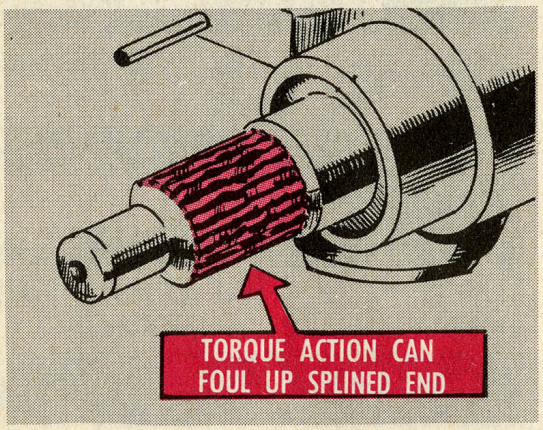
Mule towing

Seems some M274 Mechanical Mule jockeys are forgetting an important step spelled out in TM 9-8034-10, para 34b(1). This dope covers the towing of a Mule—disabled or otherwise—without a driver at the wheel.

The step overlooked is disconnecting the steering gear.



Towing the beast without doing this can cause beaucoup damage. The wheels'll produce a torquing action

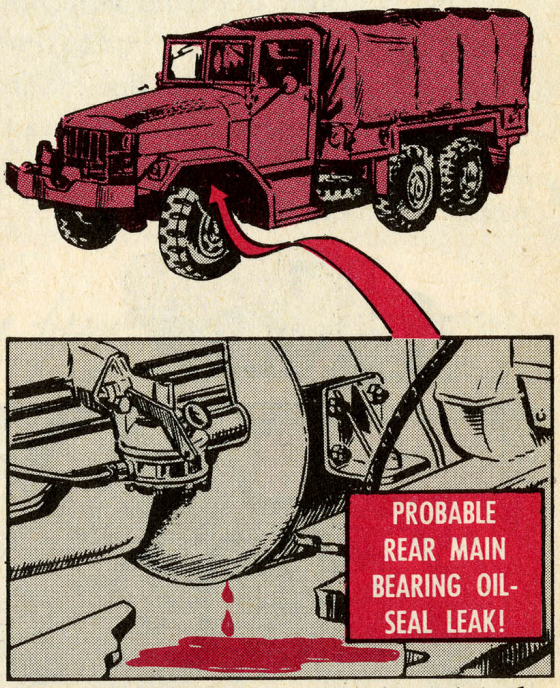


through the steering mechanism that can foul up the splined end of the steering gear lever shaft.

So watch it, hey?

Drippy hole?

On your knees, pal, and look for drops of engine oil coming from the flywheel housing drain hole of your G742-series 2½-ton trucks. If so, you may

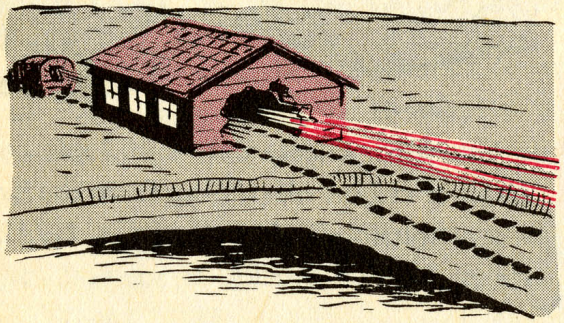


have rear main-bearing oil-seal leaks, probably caused by a worn or wrong seal that shouldn't be there.

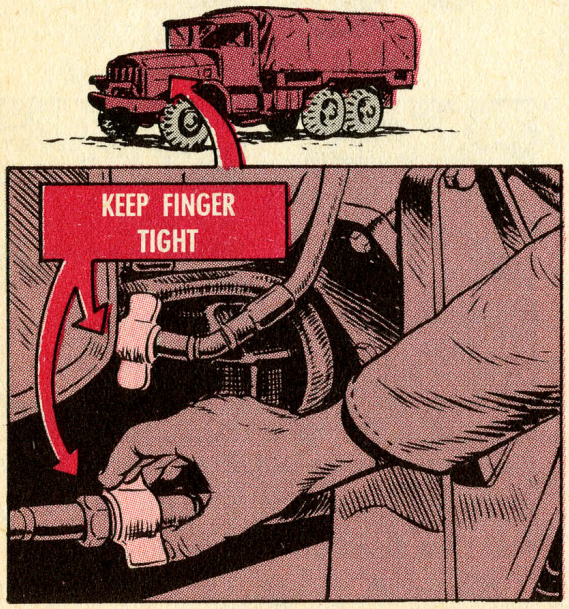
No sweat, though. Ordnance is set to fix it. What they'll do is replace that worn or improper seal with a good, right one. The right one is: Retainer, rear oil seal, w/seal, assy, FSN 2540-040-2179.

Keep 'em tight

So you drive a five-tonner (M-series truck), and she handles real sweet—steers like a T-bird (almost). OK, but how do you think she'll treat you if that power steering goes out? Not so pleasant, huh?

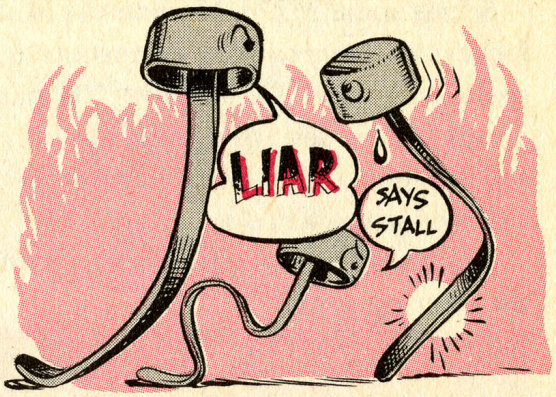


One way to keep this from happening is to give a little extra attention to those wing nuts on the hydraulic line connections—pump-to-steering gear and pump-to-reservoir. They have a way of working loose, y'know.



Every so often, lay a hand on those nuts and make sure they're tight. **Finger tight** does it. Don't go banging 'em with anything or you'll bust 'em for sure.

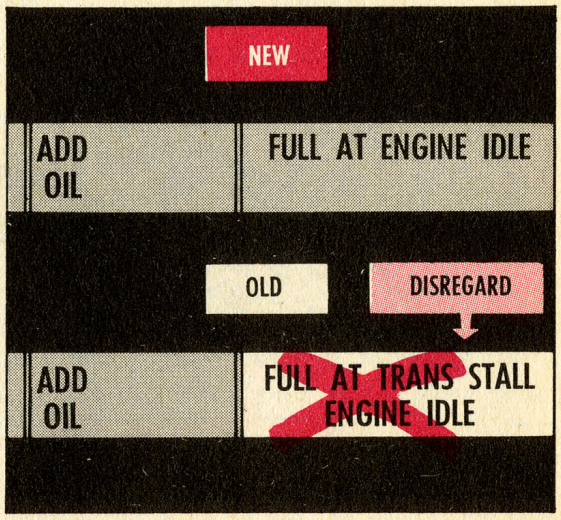
'Tain't necessarily so



You tankers with the CD-850 transmissions—there may be a few transmission dipsticks floating around with the wrong info on 'em.

Way back, you used to check the oil level with your transmission in a "stall," and the dipstick was marked with that info. Could be some of the old dipsticks are still floating around—so don't be misled.

When one of those off-beat dipsticks turns up, forget the words TRANS STALL. And use the dipstick just as



you do any other CD-850 dipstick. That is—with the transmission in neutral, engine at idle (1000-RPM) and the oil at operating temperature.

JOE'S DOPE
P.M IS EVERYBODY'S JOB
THE DIARY OF SGT. SPITTEN J. POLLISH
ENTRY #5
We've been here five days now. I don't know when we'll get out, but it better be soon. The strain of waiting is getting to the men...
COUGH COFF
HOW ABOUT SOME HOT COFFEE SOLDIER... COFF
SORRY, SARGE... THE SQUAD STOVE IS ON THE BLINK.
I LOST THE GENERATOR OFF'N IT EARLY THIS MORNIN'...
Y'WHAT??

BUT Y'R AUTHORIZED TWO EXTRA SPARES... WHERE ARE THEY??
I... ER... I F'GOT TO BRING 'EM.
I'M GONNA CHECK THE 106'S. YOU FIND THAT ★©!!#©!★ GENERATOR.
WHAT A SAP I WAS BACK IN GARRISON
YOU CHECK YOUR SPARE PARTS?
-AW WOT FER! I POLISHED ME GEAR... THAT'S MY MAINTENANCE FER TODAY!!
A FEW MINUTES LATER..
HALT!
IT'S ME... SGT. POLLISH!
YOUR RECOILESS RIFLES ZEROED IN?... IT'S TRICKY TERRAIN'... AND IF THEY TRY TO RETAKE THIS POSITION YOU'LL HAVE NO TIME TO DO ANYTHIN' BUT LOAD'N' FIRE!
(GULP) THE SIGHTS ARE ALL FROZE, SARGE.
FROZE?!! WOT KINDA MAINTENANCE YOU BEEN PERFORMIN' ON 'EM ?
WE KEPT 'EM SHINY...
YEAH... SHINY... BUT...
YOU'RE IN A COLD CLIMATE, SO THOSE RIFLES SHOULD BE KEPT IN AN UNHEATED BUILDING OR SHED. BRINGING THEM INTO A WARM BUILDING FROM THE COLD CAUSES CONDENSATION IN THINGS LIKE THE SIGHT. AND THAT CONDENSATION FREEZES WHEN THEY GET BACK IN THE COLD AGAIN.
AW, CONNIE! THAT'S JUST SUPERSITITION. I AIN'T GONNA WORK ON MY RIFLE IN THE COLD!

HEY SARGE!! SARGE!
YEOH!?
YOU KNOW WHERE I CAN GET A MANUAL ON A DOZER? WE GOT TROUBLES!!
HOW COME YOURS IS GONE?
MY BUDDY IN COMP'NY E BORROWED IT, AND NOW THE FUEL FILTER'S FROZE SOLID!
WHAT WERE YOU DOIN' BACK AT THE BASE ALL LAST WEEK ??!
*IF I'D ONLY DRAINED THE WATER AND SLUSH FROM THAT FILTER EVERY WEEK LIKE I WAS SUPPOSED TO...
GEAR READY TO ROLL?
SURE, SARGE, SURE.
ENTRY 6 It's getting dark... The men are bedding down for the night... huddled against the equipment their life depends on. The cold is more intense now, nobody feels like talking... it looks bad... I can't sleep... I remember a pinup...

JOE'S
Dope Sheet
WE HAVE THE WORLD'S BEST EQ

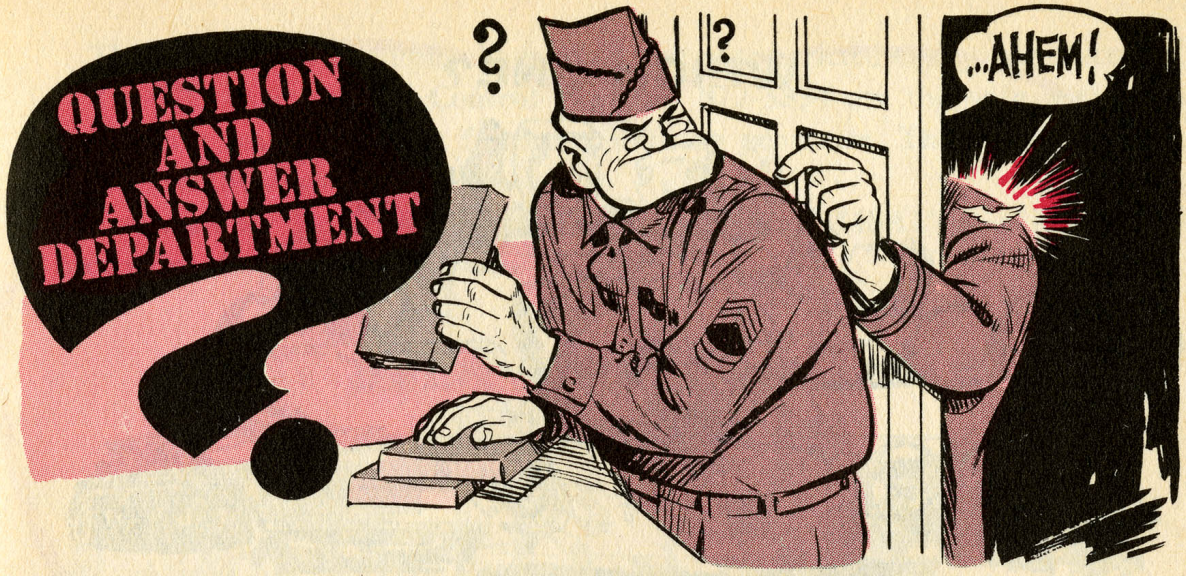
JOE'S Dope Sheet
Here is all that remains of McFitt...
Weapon failed when he most needed it.
His mistake was quite small—
Never lubed—that was all.
'Cause to him, it was all polish and spit.
WE HAVE THE WORLD'S BEST EQUIPMENT... Take care of it

UIPMENT ... *Take care of it*

LET'S TRY TO GET THROUGH ON THE RADIO AGAIN.
HUH?!
WAKE UP, SOLDIER! CALL SUPPORT... THEY CAN GET A WHIRLY BIRD — TELL 'EM TO FLY IN SOME REPAIR PARTS.
OH MY GOSH!! THE BATTERIES ARE DEAD, SARGE!!
WHAT?!
DON'T YOU KNOW THAT IN COLD WEATHER LIKE THIS YOU KEEP THEM WARM... LIKE SLEEPING WITH 'EM NEXT TO YOUR BODY?
I NEVER PAID THAT MUCH MIND.
WAITAMINIT, I GOT ONE... LUCKY I KEPT ONE IN MY INSIDE POCKET. HERE, USE THIS!
HELLO, HELLO... THIS IS LAZY FOX 13. CAN YOU 'COPTER IN SOME REPAIR PARTS? WHAT? OH NO!
WHAT'S THE MATTER?

SOME JOKER TIED THE ROTOR BLADES DOWN FOR THE NIGHT WITHOUT ENOUGH PLAY ON 'EM!
DON'T TELL ME!
...WIND CAME UP LAST NIGHT AND THE STRAIN TORE ONE BLADE LOOSE...
NOW WHAT, SARGE?
NOW WE'VE HAD IT... WE DON'T GET SOME BUNKERS DUG...AND WE CAN'T HOLD OFF AN ATTACK ...SO WE WAIT... UNTIL WE'RE OVERRUN!
IF I'D SPENT AS MUCH TIME DOING REAL MAINTENANCE AS I DID SNOWING MY CO WITH SPIT'N'POLISH...
DO WE PULL ANOTHER INSPECTION, SARGE?
NO,SIR...THE STUFF LOOKS SHARP ENOUGH ...IT REALLY SHINES!
ENTRY 7 (FINAL ENTRY) Looks like we've had it... no hope of rescue now. I hear a noise over the hill.. I hope someone finds this diary and gets the message... Here they come!! ...this is it...
CLICK CLINK CLINK

OKAY...OPEN UP...ALL THE WAY!!
CLINK
LOOKS LIKE THEY'RE ALL OUT COLD ...THEY BEEN IN HERE A LONG TIME!
HEY YOU GUYS!
...HEY... WAIT... WE'VE GOT THOSE 3 DAY PASSES YOU GET FOR THIS EXTRA DUTY!
KEEP 'EM! WE GOT WORK TO DO FIRST!
SUB-ZERO OPERATION COLDCUT
BROTHER! IF THAT HAD BEEN FOR REAL !!



ON TOP OF YOUR PM

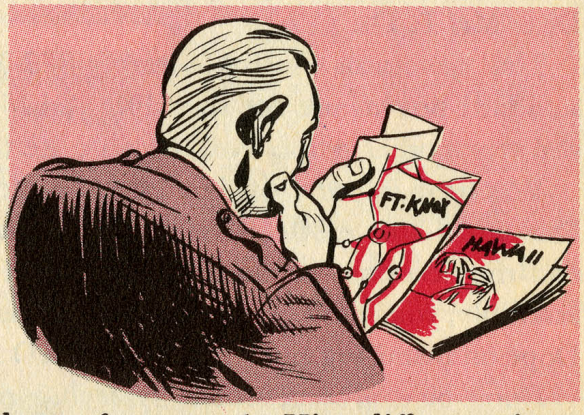
Dear Half-Mast,

I'm the maintenance officer of my unit, and the other day the CO was talking with me about how we can keep the unit's equipment in top shape for combat.

The colonel was real concerned because he has been on staff duty for several years and is not as up-to-date as he'd like to be on some of the new equipment we've got. He says his inspections won't really be any good until he gets better informed on the new equipment. To do that right takes time, and he's not got a lot of that.

Got any suggestions?

CWO R. S. L.



Dear Mr. R. S. L.,

Sure have. There are a couple of ways he can get on top of things real fast.

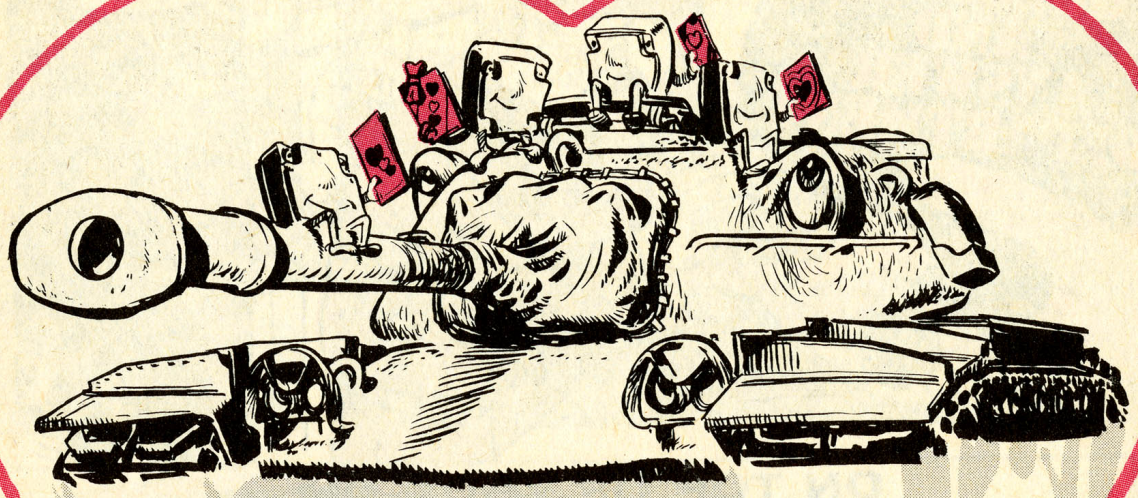
The first is to take one major piece of equipment at a time and learn as much about it as he can—maintenance-wise. You and your top maintenance noncoms could give the colonel a good briefing on each one. This could be done in a couple of hours or so on a self-propelled gun, for example. Hit a different piece of equipment each week for several weeks—and he'll soon be right with it.

There's another real gone deal your CO can take advantage of. He can get on the quota for the Senior Officers' Preventive Maintenance Course which the Army gives at Fort Knox. It's a concentrated one-week shot of PM that'll do your Old Man more good than a month at Waikiki.

Try it.

Half-Mast

WHICH ONE?



Dear Half-Mast,

Recently we ordered some General Electric main control boxes for our M48 tanks. I know that Eclipse, Delco and GE boxes are good for M48's and that Mechanical Products control boxes are used with M48A2's.

We didn't get what we ordered, though. Instead, we got boxes from Rett Products Co., Detroit, Mich., marked Ord Part No. 872-3894, 400 amp, 24-28 DC volts, Mfg's No. R-700, DA 20-113-Ord-2113. We don't even have an instruction booklet for this control box.

Can we use the Rett boxes in place of the GE's we ordered, or are they for some other vehicle?

F. D.

Dear Mr. F. D.,

That generator control assembly 872-3894 is OK and will eventually be the standard box to use for the M48 and M48A1 tanks. Don't be confused, tho, if you see another name on it, because Rett isn't the only manufacturer.

You have to order the box by asking for Generator Control Box Kit 8724327, FSN 2950-568-8680 (G251). The kit includes the generator control assembly and the necessary mounting brackets. If you order just the generator control assembly, you won't get the brackets or instructions on how to mount the assembly. Dope on installing this kit is in TB ORD 2300—30/1 (5 Jun 58).

Don't be confused, either, by trying to find the kit number in your SNL's, 'cause it's not there.

You might be interested to know there are four generator control boxes used for the M48's:

GE 735-5925, FSN 5940-735-5925.
Eclipse 752-8304, FSN 2920-752-8304 (G251).
Delco-Remy 796-8600, FSN 2920-796-8600 (G251).
Control Assembly 872-3894, FSN 2920-335-4264 (G254).

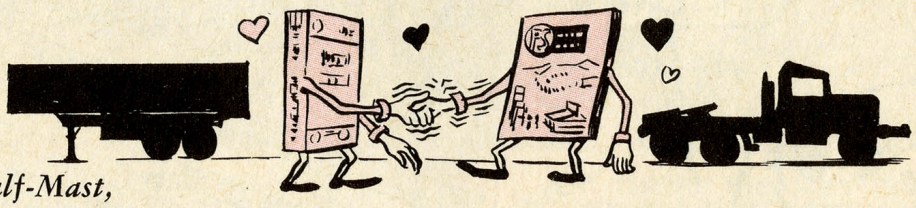
The 872-3894 is a completely detailed unit not restricted to any manufacturer.

The GE assembly and Control assembly 872-3894 are the only regulators that'll give you full output from the 300-amp generator. The other two limit current to 150 amps.

You use only the 872-3894 assembly on late model M48A1's and all M48A2's because of the changes in mounting.

Half-Mast

EVERYONE'S RIGHT



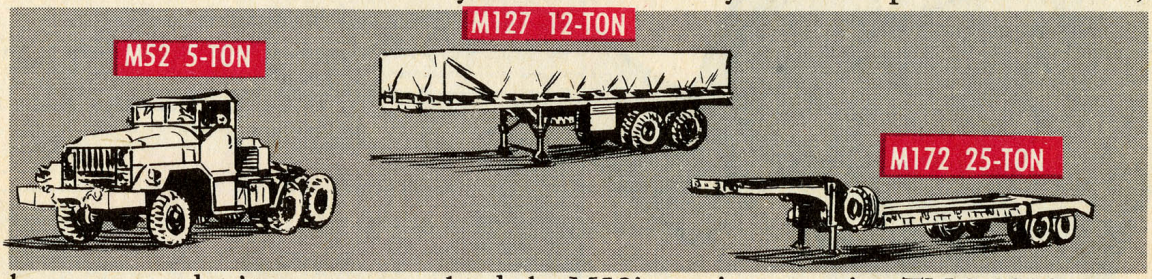
Dear Half-Mast,

What's the scoop on a tractor for the M172 25-ton low bed semi-trailer? TM 9-8222, para 4, says it is to be used with a 5-ton 6x6 tractor truck M52 or similar vehicle. On page 33, PS 64, you state the M52 is built to take the M127 12-ton trailer only.

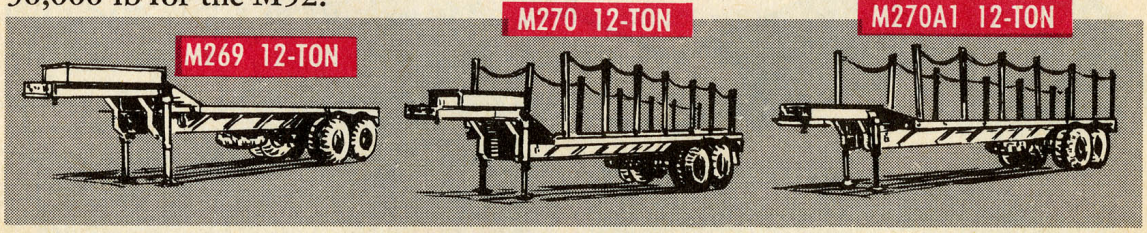
MSgt S. C. N.

Dear MSgt S. C. N.,

Everybody's right, Sarge. You are right—PS is right—the TM is right . . . and everything is quite all right. Since PS 64 was printed, the situation's been ironed out a little further . . . the M52 can handle **both** the M127 12-ton semi and the M172 25-ton low bed semi. Only be careful when you hook up with the M172,



because you don't want to overload the M52's towing capacity. TM 9-8028, page 45, says highway maximum load is 55,000 lb and off highway maximum is 30,000 lb for the M52.



By the way, the M52 will **also** pull the G802-series—that's the M269, M270 and M270A1 12-ton wrecker semi's.

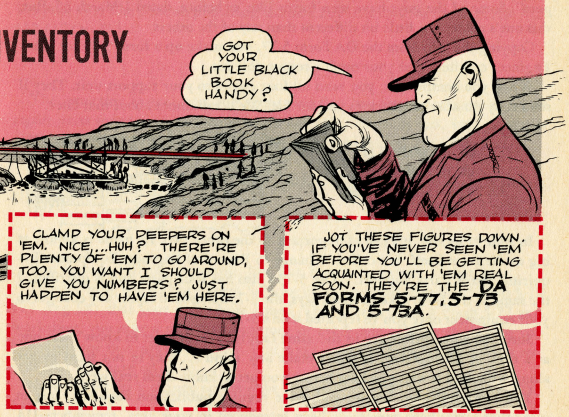
Half-Mast

Grab these forms . . .
you'll need 'em for your . . .

ENGINEER EQUIPMENT

Grab these forms . . .
you'll need 'em for your . . .

ENGINEER EQUIPMENT INVENTORY



WHAT DO THEY DO?

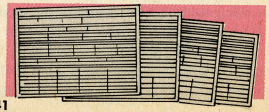
A likely question. Here's a rundown.

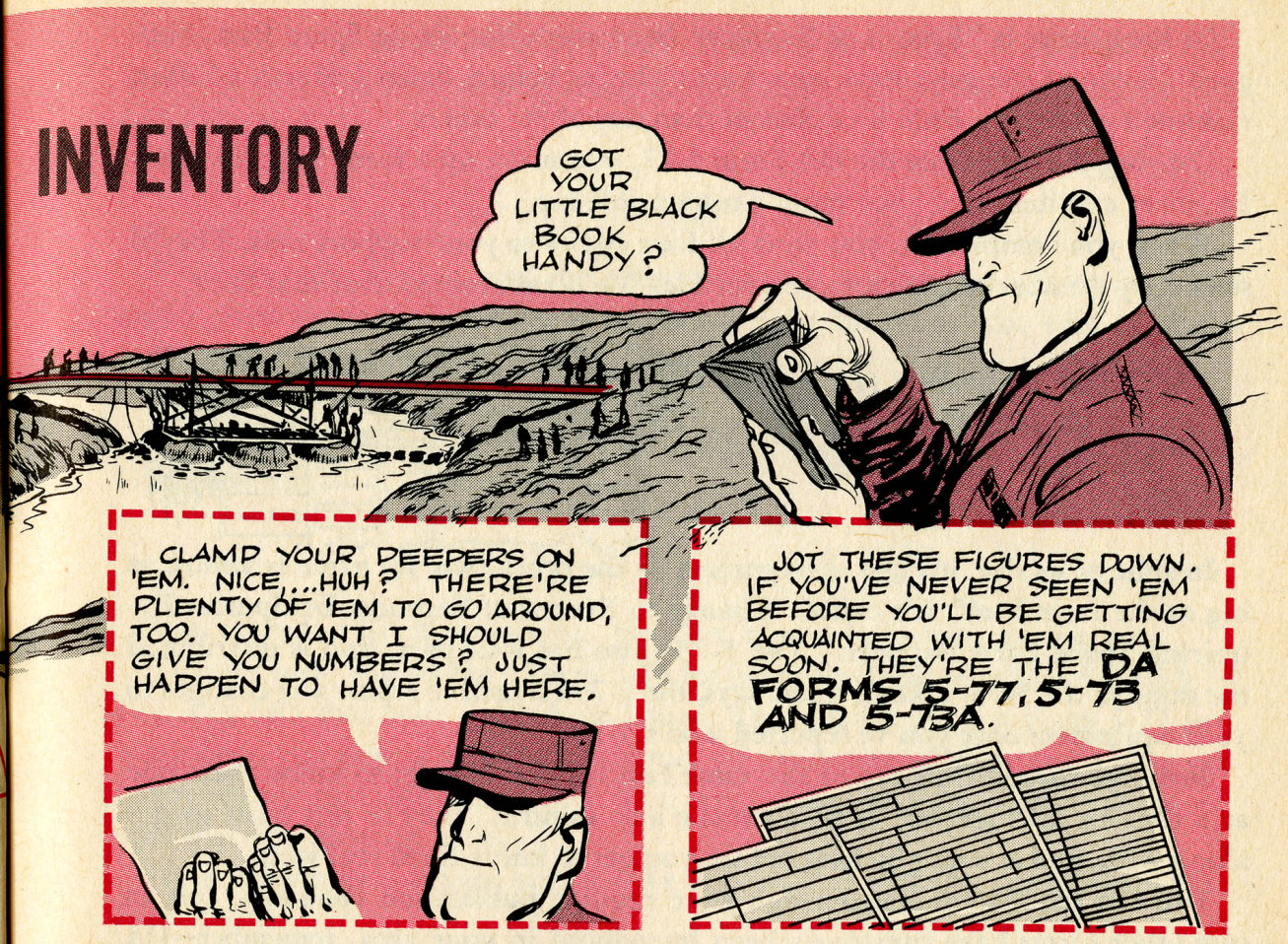
This is the latest version of DA Form 5-77 (1 Oct 58). It goes by the handle of "Equipment Data Worksheet for Engineer Supplies & Equipment."

The old form's been around for awhile. You might have seen it. Among other things it was used to put down info for making up ID plates for your Engineer equipment. But, you're more interested in it now because you use it as a worksheet when you fill out a DA Form 5-73.

Right now you want to prepare a 5-77 for each Engineer end item that your unit's been issued. Remember, this is a worksheet—not a permanent record. The 5-77's a one-time affair. When all the info you need has been taken off—you destroy it. But, hold onto it until it has served its purpose.

THE NEXT ONE'S DA FORM 5-73. (1 Sep 58) IT'S A FOUR-PART SNAP-OUT FORM.





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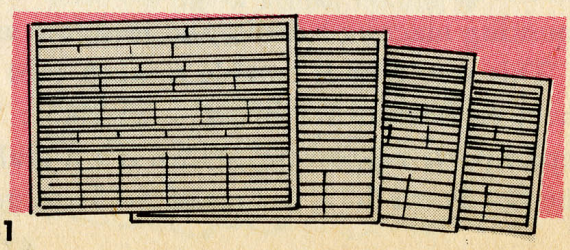
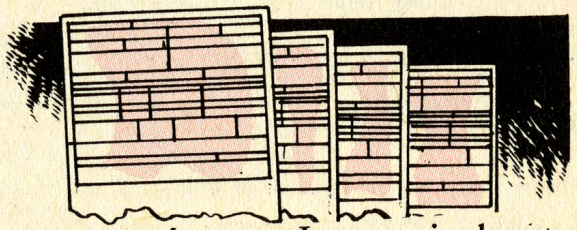


Its long name is "Record of Engineer Equipment Requiring Spare Parts Support". Some of the guys have seen forms like 'er before, dated 1 March 56. But, this one's made up a little bit different than any of the others.

Copying the info from the DA Form 5-77, you make up a form 5-73 for every Engineer end item that your outfit's responsible for.

When you complete it, you send all four copies to your support unit. They'll send copy number one back to you for file. We'll talk more about that later.

NOW THE SMALLEST OF
THE THREE FORMS IS
THE DA FORM 5-73a (1 Sep 58)



In spite of its size, it's just as important as the other two. Its name is almost as big as the form itself. It's called "Change to Record of Engineer Equipment Requiring Spare Parts Support." The 5-73a also has four parts and is distributed the same as the 5-73. Like its name says, the 5-73a is used to report any changes to your equipment once you've reported it on a 5-73.

Sure, the three forms are in the same family. You can get to know them one at a time or all together. It won't make any mind . . . they're not hard to get along with, and it won't be long before you get to know them real well.

You can requisition 'em through your regular publication channels. Just in case other forms have previously been introduced in your area, remember—**DA Forms 5-73 and 5-73a will replace all other equipment inventory forms or changes of forms in use.**

If you've already inventoried your Engineer equipment and prepared the DA Form 5-73 (1 March 56), you don't have to send the same info through again on the new DA Form 5-73. Just prepare a DA Form 5-73a to show any changes or additional data on the rigs.

WHY FILL 'EM OUT?

Man, without them, you're nowhere.

These are the forms that're being used in setting up a world-wide reporting system that will give the brass a complete inventory of Engineer equipment. They'll take the info you give 'em on the 5-73 and 5-73a, put it on EAM (electrical accounting machine) cards, and feed it to an electronic brain.

This way they'll be able to keep tabs on all Engineer equipment. It'll help them to standardize items . . . to rotate 'em . . . and to work out maintenance repair parts support programs. It's a real important deal—so it's up to you and the DA Form 5-77, 5-73, and 5-73a to put it over.

The full scoop on the inventory and reporting procedures is in AR 711-541 (25 Aug 58). The dope on preparing the new DA Form 5-77 is found in AR 742-512 (17 Oct 58).

WHO FILLS THESE FORMS OUT?

The reporting system goes for every unit that has Engineer items that need repair parts support, or end items which are components of sets, kits, or outfits . . . from the procurement activities right on down to the smallest using unit.

And, that means you, Joe.

Army National Guard units will be guided by the instructions of the National Guard Bureau.

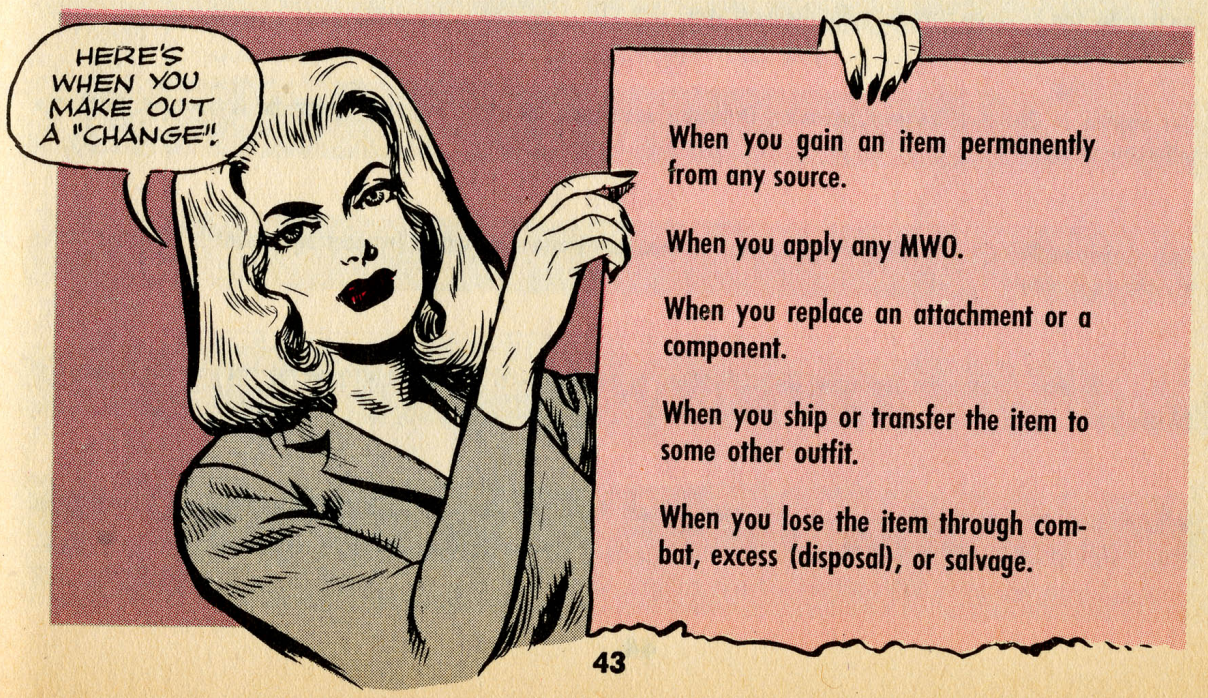
WHEN DO YOU FILL 'EM OUT?

You're sure full of questions, Joe. But, here's the answer to that, too.

To start with, you fill out a Form 5-73 for every Engineer item listed in SB 5-70 (25 Aug 58) that your unit's been issued. That means using a Form 5-77 as a worksheet, you take a **physical** inventory of every one of these items that you have and copy that info on to a 5-73. You don't complete it by copying from records that you have on hand.

Now, whenever a change occurs—like applying an MWO—you prepare a DA Form 5-73a.

From now on, when you get a new piece of equipment, it should have a 5-73 attached to it. So you fill out a "change", 5-73a, and send it through to let the wheels know who has it. If the rig doesn't have a 5-73, then you have to prepare one.



HOW DO I FILL

SECTION I

ITEM A—Use FSN's only. If the FSN isn't available, leave blank. **ITEM B**—You get this from the manufacturer's ID plates. **ITEM C**—This info will be in cu. yd., GPM, PSI, KW, KVA, etc. **ITEM D**—This is for the manufacturer's name and the five-digit code. This info is found in SM 5-3 series or SB's 708-501 and 708-502. **ITEM E**—The manufacturer's ID plates'll have this info, too. **ITEM F**—Identification info like that shown in SB 5-70, SM 5-1, SM 5-5 goes here. You use abbreviations to save space. Just that part of the description shown in capital letters in the manuals will go here.

SECTION II

ITEM A—Check this off if your equipment's in depot stock. **ITEM B**—You don't put this dope down if the lettering is smudged or faded so you have to guess what it is. **ITEM C**—Record the day, month, and year—if available. Your manufacturer's plates'll have this info, too. **ITEM D**—For end item procurement—when available. **ITEM E*** **ITEM F-G-H-I**—You get this from the ID plates or stencil on equipment. Don't guess . . . you don't want to put it down if you can't read it. **ITEMS J*-K*-L*-M*-N*-O*-P***

SECTION III

ITEM A—Give the manufacturer's name and the Federal Supply Code. **ITEM B**—Manufacturer's model number. **ITEM C**—List the alphabetical prefixes and suffixes with the numbers. **ITEM D**—Show by X.

SECTION IV

Give the info for this engine the same as you did for Section III.

SECTION V

Most of the information here can be found on the manufacturer's and Engineer ID plates on the rig. You can find the dope on the pubs in DA Pamphlet 310-4.

SECTION VI

ITEM A—Name of the manufacturer and the five-digit Federal Supply Code. **ITEM B**—Manufacturer's model number. **ITEM C**—Manufacturer's serial number on equipment. **ITEM D**—Brief description—only noun and modifier. **ITEM E**—You give the FSN or the Engineer stock number for the prime mover carrier.

SECTION VII

This is for info on the attachments that were on the end item when you inspected it. **ITEMS A** through **E** are similar to items in Section VI. Okay now, let's flip the form over.

SECTION IX

This applies to Ordnance engines powering Ordnance equipment on which Engineer equipment is mounted. Items are self-explanatory.

SECTION X

This applies to Ordnance twin-engine equipment or auxiliary engines on which Engineer equipment is mounted. Items are self-explanatory.

SECTION XI

ITEMS A through **G** cover the applicable DA publications or manufacturer's manuals for your rig. List only those shown in DA Pamphlet 310-4, DA Pamphlet 310-25, and SB 5-100.

SECTION XII

Info required on a need-to-know basis goes here. (When dope's not available to put on the DA Form 5-77, show the symbol N/A in the appropriate block.)

*You can forget about these items if you're not in a Depot. They're the only ones that would be interested in them.

HOW DO I FILL 'EM OUT?

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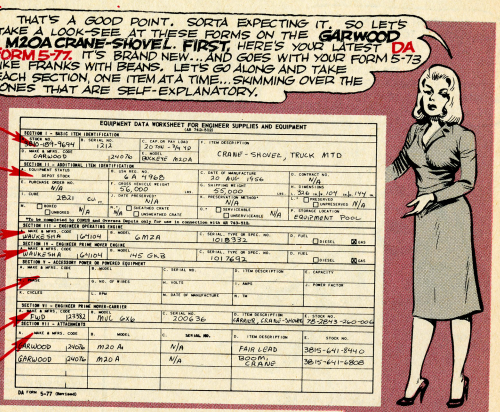


'EM OUT?

THAT'S A GOOD POINT. SORTA EXPECTING IT. SO LETS TAKE A LOOK-SEE AT THESE FORMS ON THE **GARWOOD M20A CRANE-SHOVEL. FIRST,** HERE'S YOUR LATEST **DA FORM 5-77.** IT'S BRAND NEW...AND GOES WITH YOUR FORM 5-73 LIKE FRANKS WITH BEANS. LETS GO ALONG AND TAKE EACH SECTION, ONE ITEM AT A TIME... SKIMMING OVER THE ONES THAT ARE SELF-EXPLANATORY.

EQUIPMENT DATA WORKSHEET FOR ENGINEER SUPPLIES AND EQUIPMENT
(AR 743-512)

SECTION I - BASIC ITEM IDENTIFICATION

A. STOCK NO.	B. SERIAL NO.	C. CAP. OR PAY LOAD	F. ITEM DESCRIPTION
3810-189-9694	1212	20 TON - 3/4 YD	CRANE-SHOVEL, TRUCK MTD
D. MAKE & MFRS. CODE: CARWOOD 24076		E. MODEL: BUCKEYE M20A	

SECTION II - ADDITIONAL ITEM IDENTIFICATION

A. EQUIPMENT STATUS	B. USA REG. NO.	C. DATE OF MANUFACTURE	D. CONTRACT NO.
DEPOT STOCK	6A 4968	20 AUG 1956	N/A
E. PURCHASE ORDER NO.	**F. GROSS VEHICLE WEIGHT**	**G. SHIPPING WEIGHT**	**H. DIMENSIONS**
N/A	56,000 LBS.	55,000 LBS.	L. 326 IN. W. 104 IN. H. 144 IN.
I. CUBE	**J. DATE PRESERVED***	**K. PRESERVATION METHOD***	**L.***
2821 CU. FT.	N/A	N/A	☐ PRESERVED ☐ UNPRESERVED N/A
M.	**N.***	**O.***	**P. STORAGE LOCATION**
☐ BOXED ☐ UNBOXED N/A	N/A ☐ SHEATHED CRATE ☐ UNSHEATHED CRATE	☐ SERVICEABLE ☐ UNSERVICEABLE N/A	EQUIPMENT POOL

*To be completed by CONUS and Oversea Depots only for use in connection with AR 743-512.

SECTION III - ENGINEER OPERATING ENGINE

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL, TYPE OR SPEC. NO.	D. FUEL
WAUKESHA 64104	6M2A	1018332	☐ DIESEL ☒ GAS

SECTION IV - ENGINEER PRIME MOVER ENGINE

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL, TYPE OR SPEC. NO.	D. FUEL
WAUKESHA 64104	145 GKB	1017692	☐ DIESEL ☒ GAS

SECTION V - ACCESSORY POWER OR POWERED EQUIPMENT

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL NO.	D. ITEM DESCRIPTION	E. CAPACITY
F. PHASE	G. NO. OF WIRES	H. VOLTS	I. AMPS	J. POWER FACTOR
K. CYCLES	L. RPM	M. DATE OF MANUFACTURE	N. TM	

SECTION VI - ENGINEER PRIME MOVER-CARRIER

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL NO.	D. ITEM DESCRIPTION	E. STOCK NO.
FWD 23382	MVC 6X6	200636	CARRIER, CRANE-SHOVEL	78-2843-260-006

SECTION VII - ATTACHMENTS

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL NO.	D. ITEM DESCRIPTION	E. STOCK NO.
GARWOOD 24076	M20 A1	N/A	FAIR LEAD	3815-641-8440
GARWOOD 24076	M20 A	N/A	BOOM, CRANE	3815-641-6808

DA FORM 5-77 (Revised)

SECTION VIII - ORDNANCE PRIME MOVER-CARRIER

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL NO.	D. ITEM DESCRIPTION	E. STOCK NO.

SECTION IX - ORDNANCE OPERATING ENGINE

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL, TYPE OR SPEC. NO.	D. FUEL
			☐ DIESEL ☐ GAS

SECTION X - ORDNANCE PRIME MOVER ENGINE

A. MAKE & MFRS. CODE	B. MODEL	C. SERIAL, TYPE OR SPEC. NO.	D. FUEL
			☐ DIESEL ☐ GAS

SECTION XI - APPLICABLE OPERATING AND MAINTENANCE PUBLICATIONS

A. TECH. MANUALS	B. PARTS LIST TYPE 780R9	C. LUB. ORDERS	D. MODIFICATION WORK ORDERS	E. TECH. BULLETINS	F. TYPE 7, 8 AND 9	G. OTHER
5-9517		5-9517-1	EWO 9517-1	5-9517-1	9517	
5-9488		5-9517-2	EWO 9517-2 (CIR2)	5-9488-1	9488 (CM-1)	
5-5163		5-9488	5-9517-4	5-5163-1		
5-5165		5-5163	5-9517-5	5-5165-1		
		5-5165	5-9488-1			

SECTION XII - REMARKS

SECTION II - WEIGHT AND DIMENSIONS ARE GIVEN WITHOUT CRANE BOOM. SHIPPING TONNAGE IS 70.5 TONS.

SECTION XIII - FOR USE WITH (To be completed only when basic item is an attachment for another item.)

A. ITEM DESCRIPTION	B. MAKE & MFRS. CODE	C. MODEL	D. STOCK NO.

SECTION VIII

This is for Ordnance vehicles on which Engineer equipment is mounted—like a truck, chassis, trailer. Info required is self-explanatory.

SECTION XIII

You use this section when the form is prepared for an attachment—like boom extensions, crane booms, back hoes, shovel fronts, buckets, angledozers, winches, and power units. Info on the end item on which the attachment is used goes in these blocks.

THE DA FORM 5-73

ITEM 1—Put the FSN here—if no FSN, leave it blank and make a note in the remarks section (Item 19).

ITEM 2—This is the info from the manufacturer's or the Engineer ID plates.

ITEM 4—Name of manufacturer and the five-digit code.

ITEM 7—For stocking purposes only.

ITEM 8—If not available, leave blank.

RECORD OF ENGINEER EQUIPMENT REQUIRING REPAIR PARTS SUP

BASIC ITEM IDENTIFICATION (EAM CA

1. STOCK NUMBER (1-11)	2. SERIAL NUMBER (12-21)	3. COMMAND & POS CODE (25-27)
3810-189-9694	1212	

4. MAKE & (MFRS. CODE)	(25-32)	5. MODEL
GARWOOD	24076	BUCKEYE

ADDITIONAL ITEM IDENTIFICATION (EAM

7. EQUIPMENT STATUS DEPOT STOCK	(25) CODE 6	8. US REG NO (26-33)	9. YEAR OF MA
		644968	1956

10. ENGINEER OPERATING ENGINE (EAM CARD 200) (22-24)

A. MAKE & (MFRS CODE) (25-29)	B. MODEL (30-44)
WAUKESHA 64104	6MZA

C. SERIAL, TYPE OR SPEC. NO. (45-56) D. FUEL DIESEL CODE 3 GASOLINE CODE

1018332

12. ACCESSORY POWER OR POWERED EQUIP

A. MAKE (MFRS. CODE) (25-29)	B. MODEL (30-45)	C.

13. ENGINEER PRIME MOVER-CARR

A. MAKE (MFRS CODE) (25-29)	B. MODEL (30-45)	C. SERIAL NUMB
FWD 23382	MUC 6x6	200636

15. ATTACHMENTS (EAM CA

A. MAKE (MFRS CODE) (25-29)	B. MODEL (30-45)	C. SERIAL NUMB
GARWOOD 24076	M20A	
GARWOOD 24076	M20A	

DA FORM 5-73 (REVISED) (½-Part)

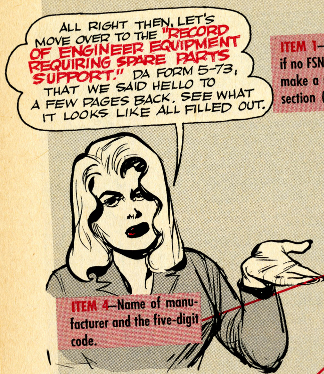
ITEM 11—This applies to the engine powering Engineer equipment—as a f'rinstance, a generator set, tractor, crane-shovel engine.

a—Name of manufacturer and code.
b—Manufacturer's model, Engineer designation, or leave blank.
c—You use the manufacturer or Engineer ID plates for this dope.
d—Check applicable block.

ITEM 13—This applies to Engineer accessory power or powered equipment—like light plants, battery chargers, compressors, pumps. It **does not apply** to engine accessories like starters, magnetos, and battery charging generators. The items 13a through 13e are self-explanatory here.

ITEM 15—You list only attachments for equipment as identified by item description and FSN of the basic equipment—like boom crane, PCU, angledozer, bulldozer, etc. You handle items 15a through 15e the same as 14a to 14e.

THE DA FORM 5-73 (AR 711-541)



ITEM 1—Put the FSN here—if no FSN, leave it blank and make a note in the remarks section (Item 19).

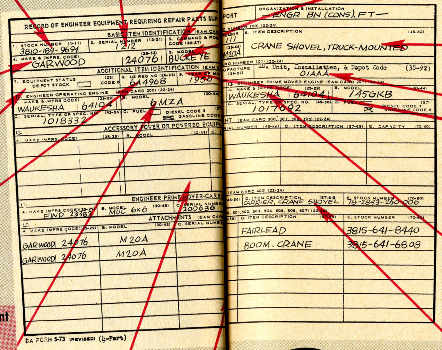
ITEM 2—This is the info from the manufacturer's or the Engineer ID plates.

ITEM 3—This is a three-digit code and is listed in Appendix I to AR 711-541.

RIGHT AT THE TOP YOU FILL IN YOUR UNIT, TECH SERVICE, AND MAILING ADDRESS. NOW YOU'RE READY TO COPY THE OTHER ITEMS FROM THE INFO ON YOUR DA FORM 5-77 FOR THE RIG.

ITEM 5—You use the manufacturer's designation for the item. If not available, use the Engineer name, or leave blank. Make a note in the remarks section that the model number is not available if left blank.

ITEM 6—If this info is not available, you give a complete description that will help to identify it. Then you state in the remarks section that the item description was not available in DA manuals.


RECORD OF ENGINEER EQUIPMENT REQUIRING REPAIR PARTS SUPPORT
ORGANIZATION & INSTALLATION — ENGR BN (CONS), FT —
BASIC ITEM IDENTIFICATION (EAM CARD NUMBER 100) (22-24)
1. STOCK NUMBER (1-11) 3810-189-9694
2. SERIAL NUMBER (12-21) 1212
3. COMMAND & POSSESSOR CODE (25-27) 111
4. MAKE & (MFRS. CODE) GARWOOD (28-32) 24076
5. MODEL (33-44) BUCKEYE M20A
6. ITEM DESCRIPTION (45-80) CRANE SHOVEL, TRUCK-MOUNTED
ADDITIONAL ITEM IDENTIFICATION (EAM CARD NUMBER 101) (22-24)
7. EQUIPMENT STATUS DEPOT STOCK (25) CODE 5
8. US REG NO (26-33) 6A4968
9. YEAR OF MANUFACTURE (34-37) 1956
10. Unit, Installation, & Depot Code (38-92) 01AAA
11. ENGINEER OPERATING ENGINE (EAM CARD 200) (22-24)
A. MAKE & (MFRS CODE) (25-29) WAUKESHA 64104
B. MODEL (30-44) 6MZA
C. SERIAL, TYPE OR SPEC. NO. (45-56) 1018332
D. FUEL (57) DIESEL CODE 3 GASOLINE CODE 6
12. ENGINEER PRIME MOVER ENGINE (EAM CARD 201) (22-24)
A. MAKE & (MFRS CODE) (25-29) WAUKESHA 64104
B. MODEL (30-44) 145GKB
C. SERIAL, TYPE OR SPEC. NO. (45-56) 1017692
D. FUEL (57) DIESEL CODE 3 GASOLINE CODE 6
13. ACCESSORY POWER OR POWERED EQUIPMENT (EAM CARD 300, 301, 302, 303) (22-24)
A. MAKE (MFRS. CODE) (25-29) | B. MODEL (30-45) | C. SERIAL NUMBER (46-56) | D. ITEM DESCRIPTION (57-69) | E. CAPACITY (70-80)
14. ENGINEER PRIME MOVER-CARRIER (EAM CARD 400) (22-24)
A. MAKE (MFRS CODE) (25-29) FWD 23382 | B. MODEL (30-45) MUC 6x6 | C. SERIAL NUMBER (46-56) 200636 | D. ITEM DESCRIPTION (57-69) CARRIER, CRANE SHOVEL | E. STOCK NUMBER (70-80) 78-2843-260-006
15. ATTACHMENTS (EAM CARD 500, 501, 502, 503, 504, 505, 506, 507) (22-24)
A. MAKE (MFRS CODE) (25-29) | B. MODEL (30-45) | C. SERIAL NUMBER (46-56) | D. ITEM DESCRIPTION (57-69) | E. STOCK NUMBER (70-80)
GARWOOD 24076 | M20A | | FAIRLEAD | 3815-641-8440
GARWOOD 24076 | M20A | | BOOM, CRANE | 3815-641-6808
DA FORM 5-73 (REVISED) (L-Part)

ITEM 4—Name of manufacturer and the five-digit code.

ITEM 7—For stocking purposes only.

ITEM 8—If not available, leave blank.

ITEM 9—If not available, leave blank. Make a note of this in the remarks section.

ITEM 10—ZI Army, Overseas Command code, outlined in Appendix II, AR 711-541, assigned by major command.

ITEM 11—This applies to the engine powering Engineer equipment—as a f'rinstance, a generator set, tractor, crane-shovel engine.

a—Name of manufacturer and code.
b—Manufacturer's model, Engineer designation, or leave blank.
c—You use the manufacturer or Engineer ID plates for this dope.
d—Check applicable block.

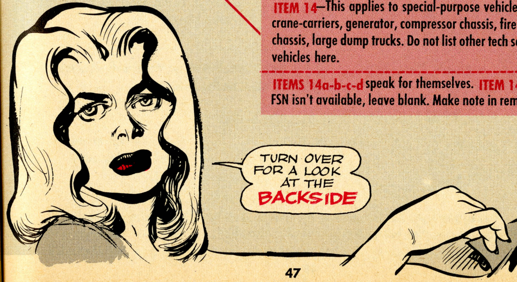
ITEM 12—Now, this info is for the engine powering the Engineer prime-movers, or crane-carriers, or auxiliary engine on the rig. Fill in items 12 a-b-c-d the same as you did in Item 11.

ITEM 13—This applies to Engineer accessory power or powered equipment—like light plants, battery chargers, compressors, pumps. It **does not apply** to engine accessories like starters, magnetos, and battery charging generators. The items 13a through 13e are self-explanatory here.

ITEM 14—This applies to special-purpose vehicles like crane-carriers, generator, compressor chassis, fire truck chassis, large dump trucks. Do not list other tech service vehicles here.

ITEMS 14a-b-c-d speak for themselves. **ITEM 14e**—If FSN isn't available, leave blank. Make note in remarks.

ITEM 15—You list only attachments for equipment as identified by item description and FSN of the basic equipment—like boom crane, PCU, angledozer, bulldozer, etc. You handle items 15a through 15e the same as 14a to 14e.



(AR 711-541)

ITEM 3—This is a three-digit code and is listed in Appendix I to AR 711-541.

RIGHT AT THE TOP YOU FILL IN YOUR UNIT, TECH SERVICE, AND MAILING ADDRESS. NOW YOU'RE READY TO COPY THE OTHER ITEMS FROM THE INFO ON YOUR DA FORM 5-77 FOR THE RIG.

ITEM 5—You use the manufacturer's designation for the item. If not available, use the Engineer name, or leave blank. Make a note in the remarks section that the model number is not available if left blank.

ITEM 6—If this info is not available, you give a complete description that will help to identify it. Then you state in the remarks section that the item description was not available in DA manuals.

ITEM 9—If not available, leave blank. Make a note of this in the remarks section.

ITEM 10—ZI Army, Overseas Command code, outlined in Appendix II, AR 711-541, assigned by major command.

ITEM 12—Now, this info is for the engine powering the Engineer prime-movers, or crane-carriers, or auxiliary engine on the rig. Fill in items 12 a-b-c-d the same as you did in Item 11.

ITEM 14—This applies to special-purpose vehicles like crane-carriers, generator, compressor chassis, fire truck chassis, large dump trucks. Do not list other tech service vehicles here.

ITEMS 14a-b-c-d speak for themselves. **ITEM 14e**—if FSN isn't available, leave blank. Make note in remarks.

PORT — ORGANIZATION & INSTALLATION: —ENGR BN (CONS), FT—

NUMBER 100) (22-24)

ESSOR 111 (33-44) M20A — 6. ITEM DESCRIPTION (45-80): CRANE SHOVEL, TRUCK-MOUNTED

RD NUMBER 101) (22-24)

UFACTURE (34-37) — 10. Unit, Installation, & Depot Code (38-92): 01AAA

13. ENGINEER PRIME MOVER ENGINE (EAM CARD 201) (22-24)

A. MAKE & (MFRS CODE) (25-29): WAUKESHA 64104 — B. MODEL (30-44): 145GKB

C. SERIAL, TYPE OR SPEC. NO. (45-56): 1017092 — D. FUEL (57): DIESEL CODE 3 / GASOLINE CODE 6

NT (EAM CARD 300, 301, 302, 303) (22-24)

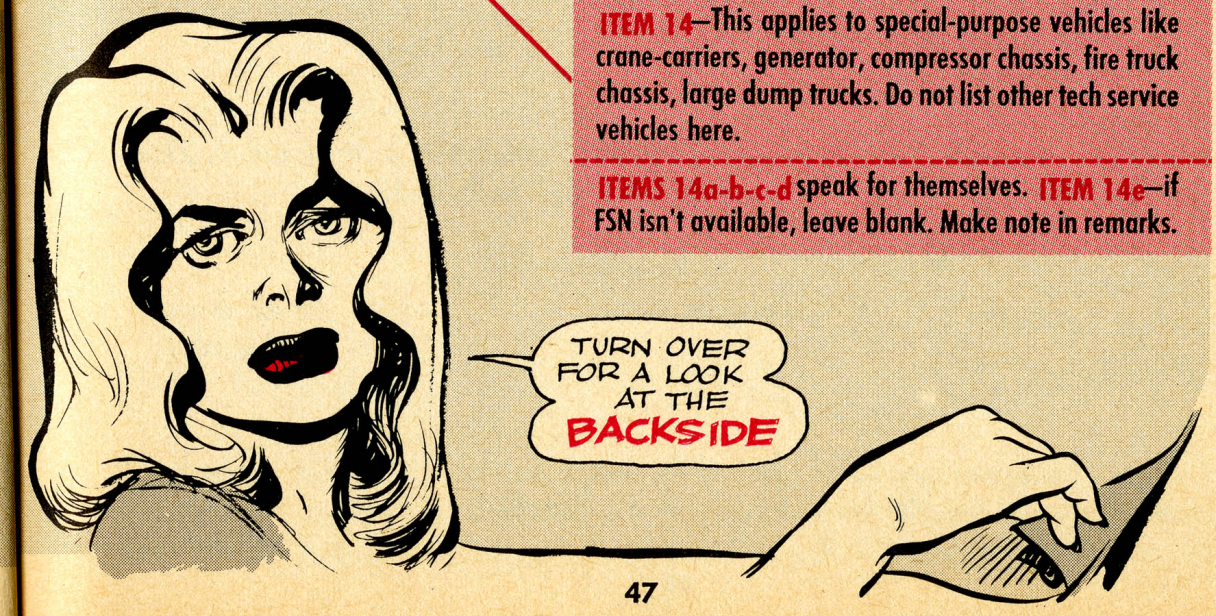
RIAL NUMBER (46-56)	D. ITEM DESCRIPTION (57-69)	E. CAPACITY (70-80)

(EAM CARD 400) (22-24)

(46-56)	D. ITEM DESCRIPTION (57-69)	E. STOCK NUMBER (70-80)
	CARRIER, CRANE SHOVEL	78-2843-260-006

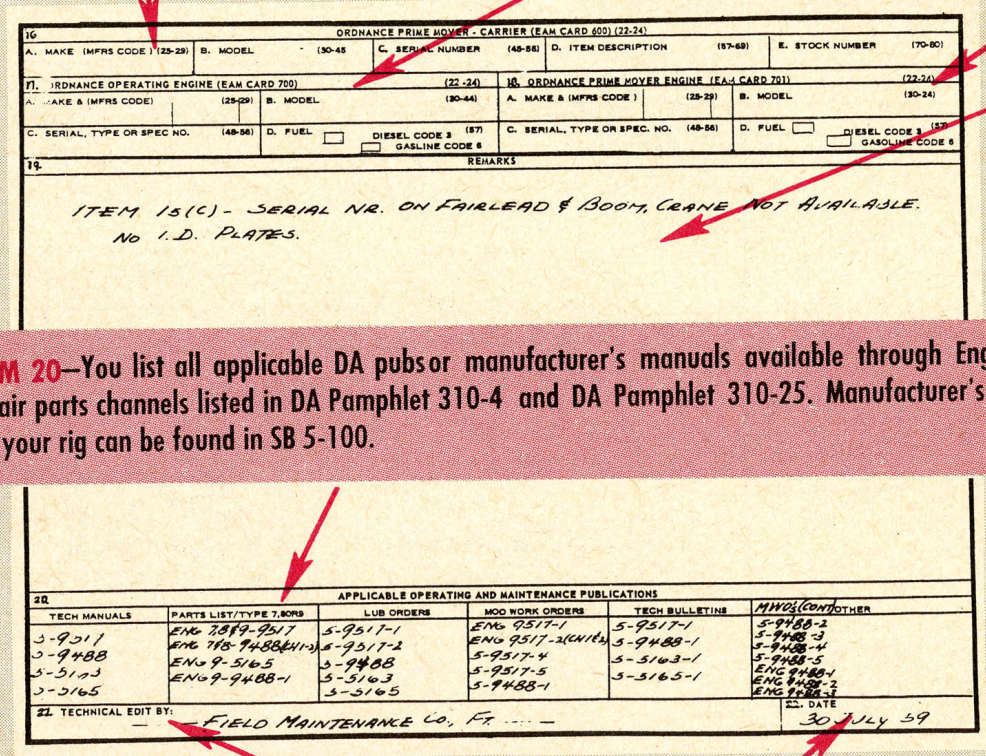
0, 501, 502, 503, 504, 505, 506, 507) (22-24)

-56)	D. ITEM DESCRIPTION (57-69)	E. STOCK NUMBER (70-80)
	FAIRLEAD	3815-641-8440
	BOOM. CRANE	3815-641-6808



ITEM 16—This is for Ordnance vehicles on which Engineer equipment is mounted—as a truck, chassis, trailer. Info required in items 16a through 16e is self-explanatory.

ITEM 17—This applies to Ordnance engines powering Ordnance equipment on which Engineer equipment is mounted. Items 17a through 17e are self-explanatory.



16 ORDNANCE PRIME MOVER - CARRIER (EAM CARD 600) (22-24)

A. MAKE (MFRS CODE) (25-29)	B. MODEL (30-45	C. SERIAL NUMBER (45-56)	D. ITEM DESCRIPTION (57-69)	E. STOCK NUMBER (70-80)

17. ORDNANCE OPERATING ENGINE (EAM CARD 700) (22-24)

A. MAKE & (MFRS CODE) (25-29)	B. MODEL (30-44)	C. SERIAL, TYPE OR SPEC NO. (48-56)	D. FUEL ☐ DIESEL CODE 3 ☐ GASLINE CODE 6 (57)

18. ORDNANCE PRIME MOVER ENGINE (EAM CARD 701) (22-24)

A. MAKE & (MFRS CODE) (25-29)	B. MODEL (30-24)	C. SERIAL, TYPE OR SPEC. NO. (48-56)	D. FUEL ☐ DIESEL CODE 3 ☐ GASOLINE CODE 6 (57)

19. REMARKS

ITEM 15(C) - SERIAL NR. ON FAIRLEAD & BOOM, CRANE NOT AVAILABLE.
NO I.D. PLATES.

ITEM 20—You list all applicable DA pubs or manufacturer's manuals available through Engineer repair parts channels listed in DA Pamphlet 310-4 and DA Pamphlet 310-25. Manufacturer's pubs for your rig can be found in SB 5-100.

20. APPLICABLE OPERATING AND MAINTENANCE PUBLICATIONS

TECH MANUALS	PARTS LIST/TYPE 7,8OR9	LUB ORDERS	MOD WORK ORDERS	TECH BULLETINS	MWO's (CONT) OTHER
5-9517	ENG 7,8&9-9517	5-9517-1	ENG 9517-1	5-9517-1	5-9488-2
5-9488	ENG 7&8-9488(CH1-2)	5-9517-2	ENG 9517-2(CH1&2)	5-9488-1	5-9488-3
5-5163	ENG 9-5165	5-9488	5-9517-4	5-5163-1	5-9488-4
5-5165	ENG 9-9488-1	5-5163	5-9517-5	5-5165-1	5-9488-5
		5-5165	5-9488-1		ENG 9488-1
					ENG 9488-2
					ENG 9488-3

21. TECHNICAL EDIT BY: — FIELD MAINTENANCE CO., FT. ---- — 22. DATE 30 JULY 59

ITEM 21—Technical edit will be made by all activities responsible for field maintenance support—your field maintenance unit will handle this.

ITEM 22—The date technical edit was completed goes here. Your support unit will also handle this.

ITEM 8—Check only if the equipment is part of, or for depot stock—otherwise leave blank.

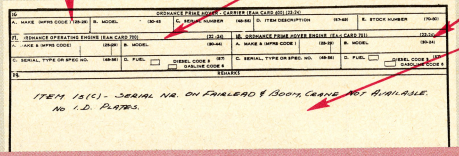
ITEM 11—Fill in only if attachments or components were modified or replaced. All this info is on the 5-73.

ITEM 12—Fill in only when shipping equipment.

ITEM 16—This is where you tell the story of the change. Note the MWO applied, component replaced, etc., and any other information on a need-to-know basis.

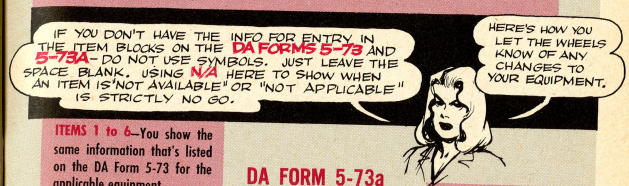
ITEM 16—This is for Ordnance vehicles on which Engineer equipment is mounted—as a truck, chassis, trailer. Info required in items 16a through 16e is self-explanatory.

ITEM 17—This applies to Ordnance engines powering Ordnance equipment on which Engineer equipment is mounted. Items 17a through 17e are self-explanatory.

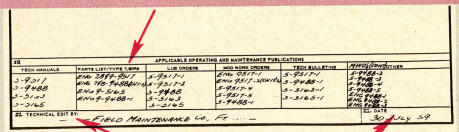


ITEM 18—This applies to Ordnance twin-engine equipment or auxiliary engines on which Engineer equipment is mounted. 18a through 18d are self-explanatory.

ITEM 19—All info required on a need-to-know basis goes here. This includes non-availability of FSN, serial number, year of manufacture; equipment reported as a component of set (you give the number of the set); when FSN or serial number is not known and additional info is included to assist in identification of item.



ITEM 20—You list all applicable DA pubs or manufacturer's manuals available through Engineer repair parts channels listed in DA Pamphlet 310-4 and DA Pamphlet 310-25. Manufacturer's pubs for your rig can be found in SB 5-100.



ITEMS 1 to 6—You show the same information that's listed on the DA Form 5-73 for the applicable equipment.

DA FORM 5-73a

ITEM 7—Check if applicable. Otherwise you leave blank.

ITEM 9—This number assigned by major command.

ITEM 10—Give number. If none assigned, leave blank.

ITEM 21—Technical edit will be made by all activities responsible for field maintenance support—your field maintenance unit will handle this.

ITEM 22—The date technical edit was completed goes here. Your support unit will also handle this.

ITEM 8—Check only if the equipment is part of, or for depot stock—otherwise leave blank.

ITEM 11—Fill in only if attachments or components were modified or replaced. All this info is on the 5-73.

ITEM 12—Fill in only when shipping equipment.

ITEM 13—Give date, when applicable. Otherwise leave blank.

ITEM 15—Give date, when applicable. Otherwise leave blank.

ITEM 14—Fill in only when receiving equipment.

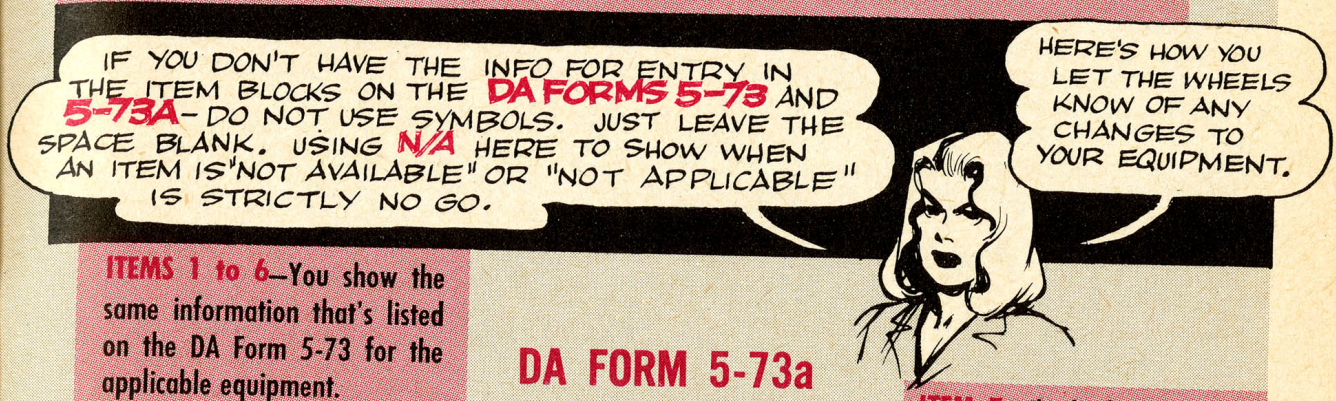
ITEM 16—This is where you tell the story of the change. Note the MWO applied, component replaced, etc., and any other information on a need-to-know basis.

ITEM 17—The unit designation, location, the installation or depot code of the organization which applied the MWO or performed the technical edit goes here.

ITEM 18—The date of the action or when the technical edit was completed—as applicable—goes here.

ITEM 18—This applies to Ordnance twin-engine equipment or auxiliary engines on which Engineer equipment is mounted. 18a through 18d are self-explanatory.

ITEM 19—All info required on a need-to-know basis goes here. This includes non-availability of FSN, serial number, year of manufacture; equipment reported as a component of set (you give the number of the set); when FSN or serial number is not known and additional info is included to assist in identification of item.



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DA FORM 5-73a

ITEM 7—Check if applicable. Otherwise you leave blank.

ITEM 9—This number assigned by major command.

ITEM 10—Give number. If none assigned, leave blank.

ITEM 13—Give date, when applicable. Otherwise leave blank.

ITEM 15—Give date, when applicable. Otherwise leave blank.

ITEM 14—Fill in only when receiving equipment.

ORGANIZATION & INSTALLATION — ENGR BN (CONS), FT —

1. STOCK NUMBER 3810-189-9694	2. SERIAL NO. 1212	3. COMMAND AND POSSESSOR CODE
4. MAKE (MFRS. CODE) GARWOOD 24076	5. MODEL BUCKEYE M 20A	
6. ITEM DESCRIPTION CRANE-SHOVEL, TRUCK MTD.	7. TYPE OF LOSS ☐ COMBAT ☐ EXCESS DISPOSAL ☐ SALVAGE	
8. EQUIPMENT STATUS DEPOT STOCK ☐ CODE 8	9. Unit, Installation, & Depot Code 01AAA	10. US REGISTRATION NO. SA4968

11. ATTACHMENT (S) OR COMPONENT (S)

A. MAKE (MFRS. CODE)	B. MODEL	C. SERIAL NO.	D. ITEM DESCRIPTION

12. SHIPPED BY:	13. DATE	14. RECEIVED BY:	15. DATE

16. REMARKS MWO's 3-9517-4 AND 5-9517-5 APPLIED.

17. TECHNICAL EDIT BY:	18. DATE
— FIELD MAINTENANCE CO., FT —9828B	27 AUG 54

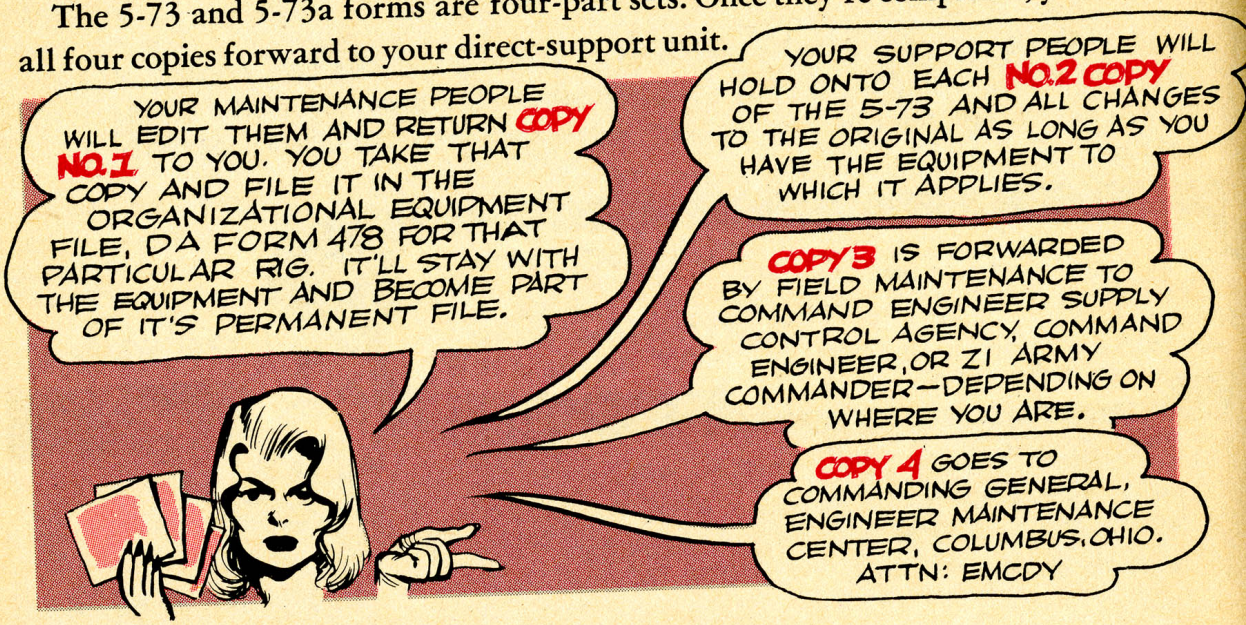
DA FORM 5-73a (REVISED) (4-Part) CHANGE TO RECORD OF ENGINEER EQUIPMENT REQUIRING REPAIR PARTS SUPPORT

ITEM 17—The unit designation, location, the installation or depot code of the organization which applied the MWO or performed the technical edit goes here.

ITEM 18—The date of the action or when the technical edit was completed—as applicable—goes here.

WHERE DO THE FORMS GO?

The 5-73 and 5-73a forms are four-part sets. Once they're completed, you send all four copies forward to your direct-support unit.



ANY SPECIAL INSTRUCTION?

There're a few items to get squared away on. But, there's no sweat, once you get your paws on these forms you'll know what to do.

When you send equipment to field maintenance activities, you send along the 5-73 and 5-73a's with the jacket folder, record of MWO's, and major assembly replacement record.

If your rig is powered by more than two engines, you report it by using additional 5-73's.

All authorized MWO's on the equipment at the time you make the initial survey will be noted in the remarks section of the 5-73.

You report Engineer items which are components of Engineer or other tech service sets, kits, or outfits with the applicable set, kit, or outfit separately and note the FSN and the item description of the kit in the remarks section.

DA Form 5-73a will not be prepared until a 5-73 is sent in.

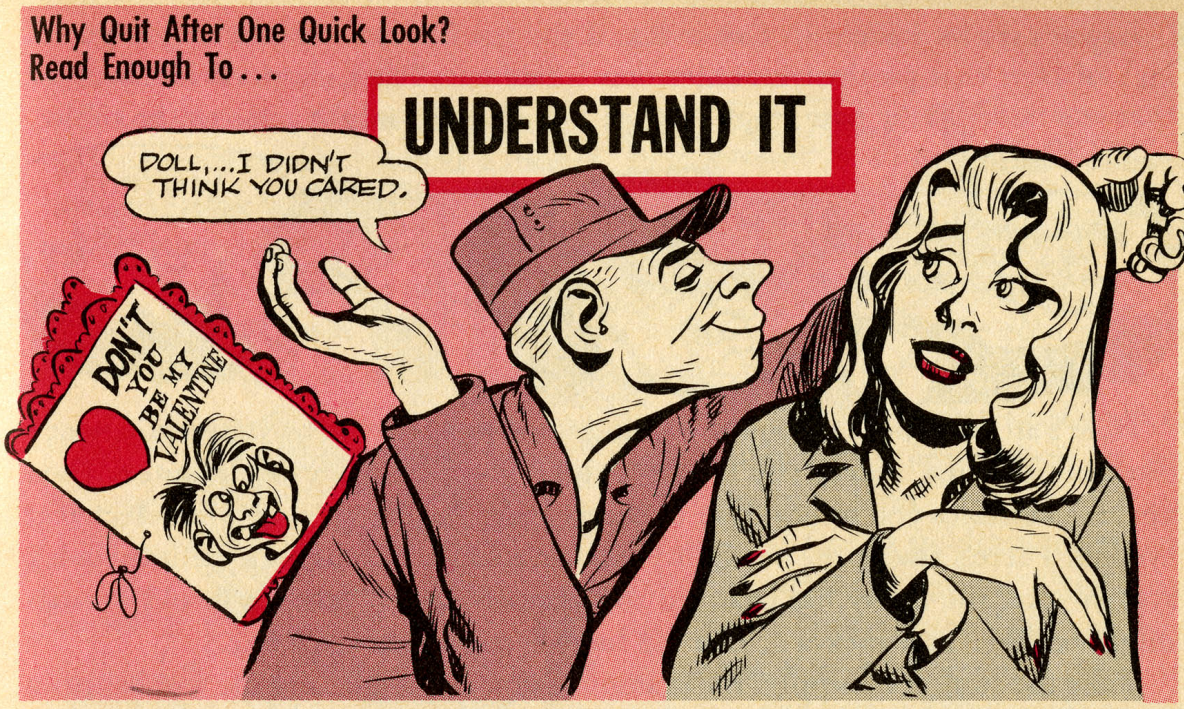
When your unit receives equipment direct from depot or from procurement and two copies of DA Form 5-73 are attached, you send one copy (No. 2) to your supporting field maintenance activity.

If you receive equipment without the DA Form 5-73 attached, you make out the form and send it through the same as you did for the initial inventory.

One more thing, Joe, before I quit beating my gums and shove off. This I've said before, but it's worth chewing twice . . .

The DA Forms 5-73 and 5-73a take the place of all other equipment inventory record forms or change forms in use.

Why Quit After One Quick Look?
Read Enough To . . .

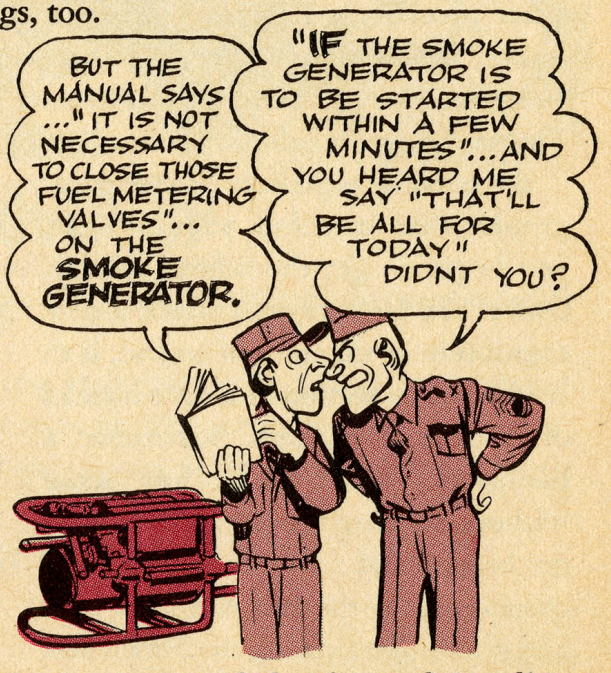


Ever catch yourself grabbing hold of a new regulation or manual, reading one or two paragraphs, and then coming up with an interpretation nobody else agrees with?

If you haven't, you're not normal—it's just plain old human nature to read things your own way. But there're a few good-to-remember things on how to read a directive the **right** way—so you can cut down on the number of those misunderstandings. Could help to cut down on gigs, too.

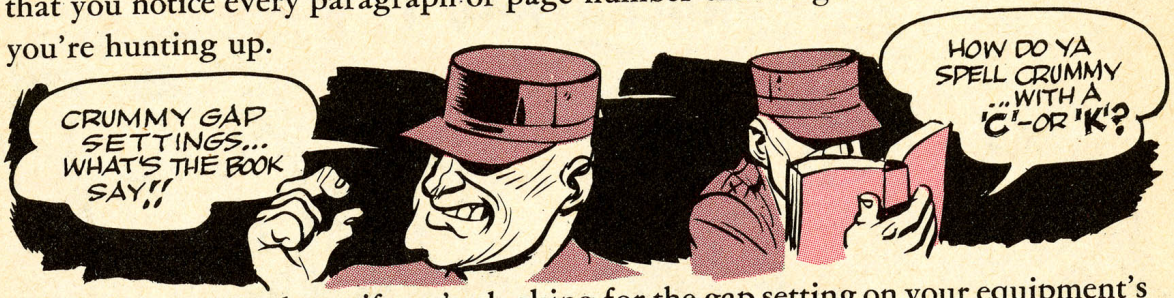
First, be sure you have a real good go at the **Purpose** and **Scope** paragraphs. You'll always find them at the beginning of Army regulations and most manuals. They were purposely put in front so you wouldn't miss the point that a directive:

1. HAS A REASON FOR BEING PUT OUT, AND . . .
2. COVERS A SPECIFIC AREA **ONLY.**



Most publication conflicts start from somebody trying to force one publication to overlap another by misreading it—or when somebody tries to stretch the meaning of a publication past the point it was intended to be used. Reading things into regulations or manuals is a tricky business . . . interpretation needs to be blended with a goodly mixture of common sense.

Always try to make use of an index, if the publication has one, so you get an idea of how that particular publication is laid out. Then, check carefully to see that you notice every paragraph or page number that **might** refer to the subject you're hunting up.

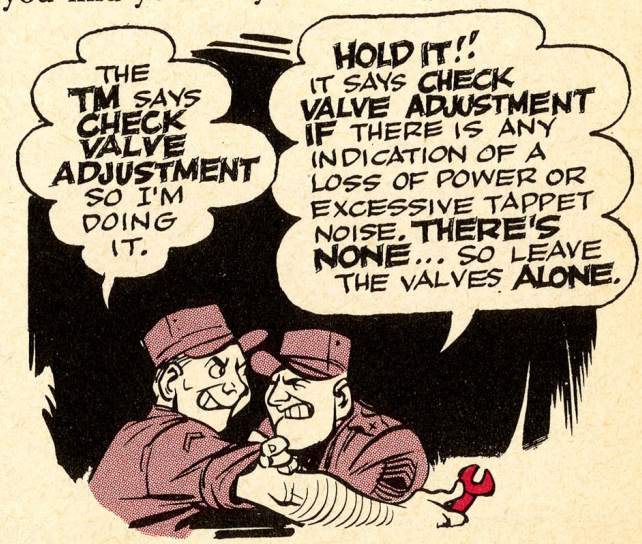


Here's an example . . . if you're looking for the gap setting on your equipment's distributor points, maybe you'll spot it right off the bat under **distributor.** Then again, sometimes you might have to check under **ignition** . . . or even **electrical system.** There's always the possibility—like in looking through the military index system—that the Army has changed the nomenclature . . . then your old **wrench** might be listed as a **socket** or that old **handle** might now be a **bar.**

Take the subject of **supply,** for example. Sure, you might find the word **supply** printed in bold letters right at the head of a section. But, you're just as likely to see it mentioned under **forms, accountability, requisitioning**—even **maintenance procedures.**

This is a good example of what usually seems to be the trickiest part of working your way through an Army publication . . . to find **every** reference to the subject you're interested in. That means using your noggin to figure out what other procedures have something to do with what you're looking up. For instance, **maintenance procedures** usually refer to **supply** operations somewhere along the line . . . because maintenance depends on a good flow of repair parts. This is the type of thinking that helps you find your way around a publication.

By putting together all the paragraphs that mention your subject, you begin to get the whole picture. One of the best ways to attack a new regulation or manual, of course, is to read a whole section at a time instead of just one paragraph. Sometimes, a paragraph won't make any sense without reading the paragraphs that go before and after it. That's like coming in on the tail end of a joke and not understanding the punch line . . . real frustratin'.



A favorite policy of the Army is not to repeat the same info in two different publications. Instead, you get referred to the other publications that already men-

tion things that tie in with the subject . . . like when the Army tells you to go to a special TM for more info on cleaning and preserving materials.

When it comes down to it, though, nothing beats cutting yourself a slice of time that's big enough to allow you to go over a regulation or manual a couple-three times—so as not to miss a point. Sometimes, that point doesn't smack you in the face until you've read another paragraph, which can come about 10—even 20—pages later.

If it so happens that need-to-have type publications never seem to get down to your level, check with your officer in charge of publications at battalion, regiment or group. After three months go by—counting from the date of publication—you've got a right to gripe . . . and keep griping until you get them.

FOR A . . .

QUICK COVER UP

TM's, FM's, PS's . . . anything you name. They're all publications that (should) get plenty of thumbing night and day.

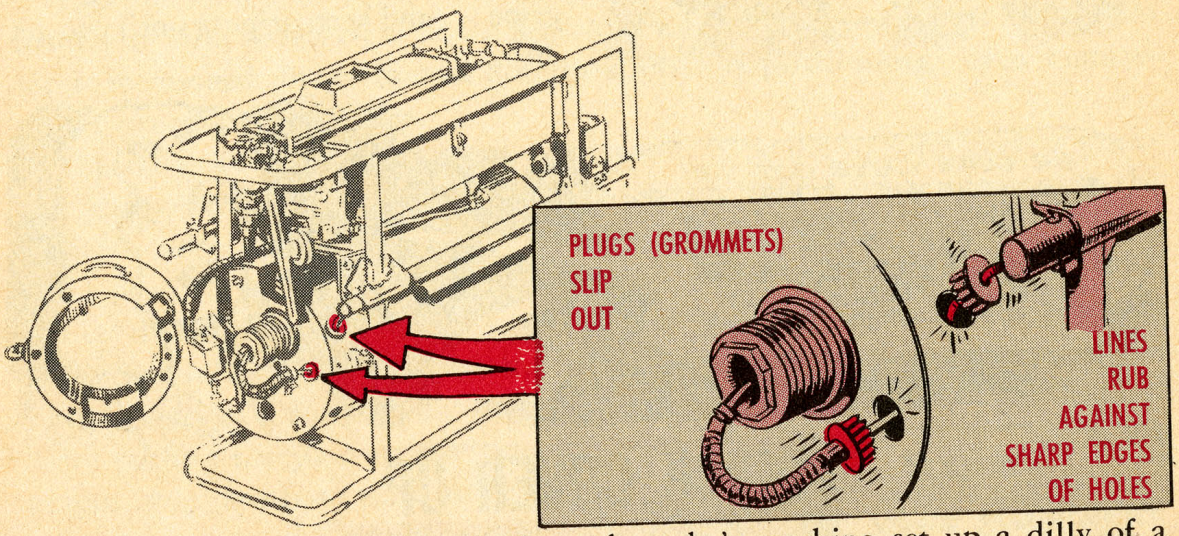
But they don't have the ruggedest covers in the world, so a little extra protection can make 'em last longer and easier to read. The secret weapon is a plastic, transparent cover that's washable, scuff-proof and which resists grease, water and alcohol.

PICK YOUR COVER:

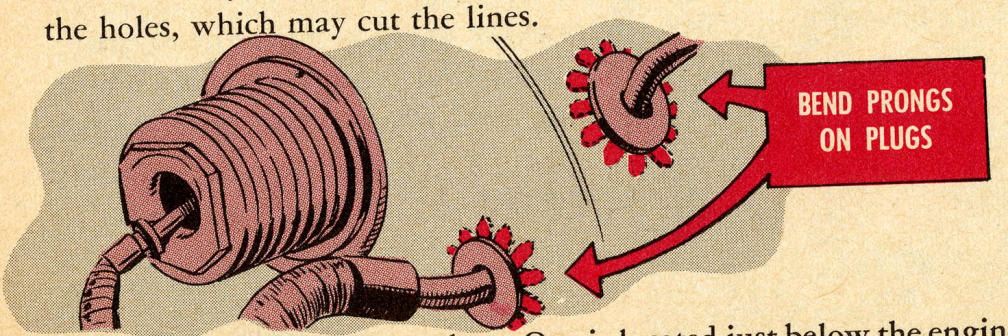
BINDER, MAGAZINE, plastic	LENGTH (in)	WIDTH (in)
7510-292-9338 (QM)	7½	5½
7510-292-9339 (QM)	11½	8½
7510-292-9340 (QM)	13½	10½

Don't Pop Your Buttons

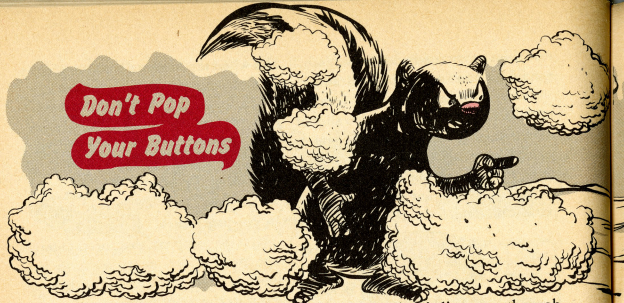
The button-type plugs or grommets in the holes that the air lines pass through on your M3A1 or M3A2 smoke generator, that is. Seems that more than a few operators have been havin' trouble with the button plugs slippin' out of the holes.



The explosions from your smoker when she's working set up a dilly of a vibration. If your plugs aren't tight, the lines can rub against the sharp edges of the holes, which may cut the lines.



You've got two of these plugs. One is located just below the engine head assembly on the front baffle where it receives the air line. The other is found where the line enters the outer shell of the engine group.



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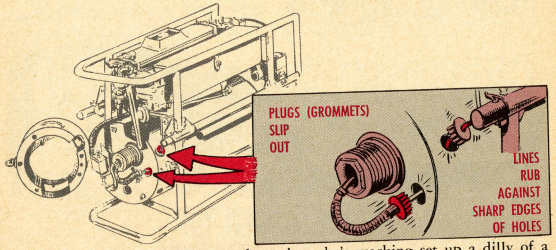
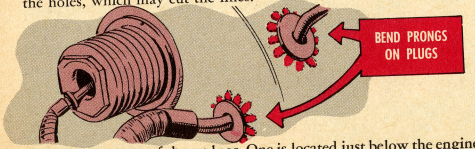
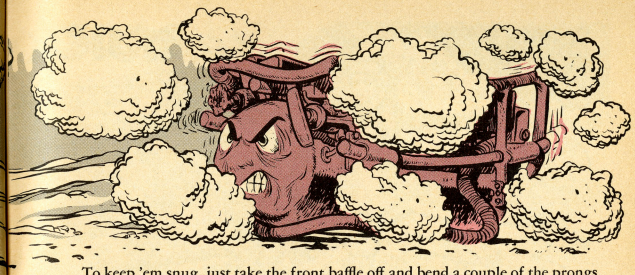


The explosions from your smoker when she's working set up a dilly of a vibration. If your plugs aren't tight, the lines can rub against the sharp edges of the holes, which may cut the lines.

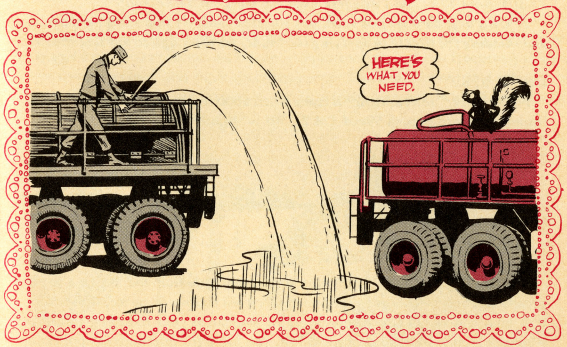


You've got two of these plugs. One is located just below the engine head assembly on the front baffle where it receives the air line. The other is found where the line enters the outer shell of the engine group.



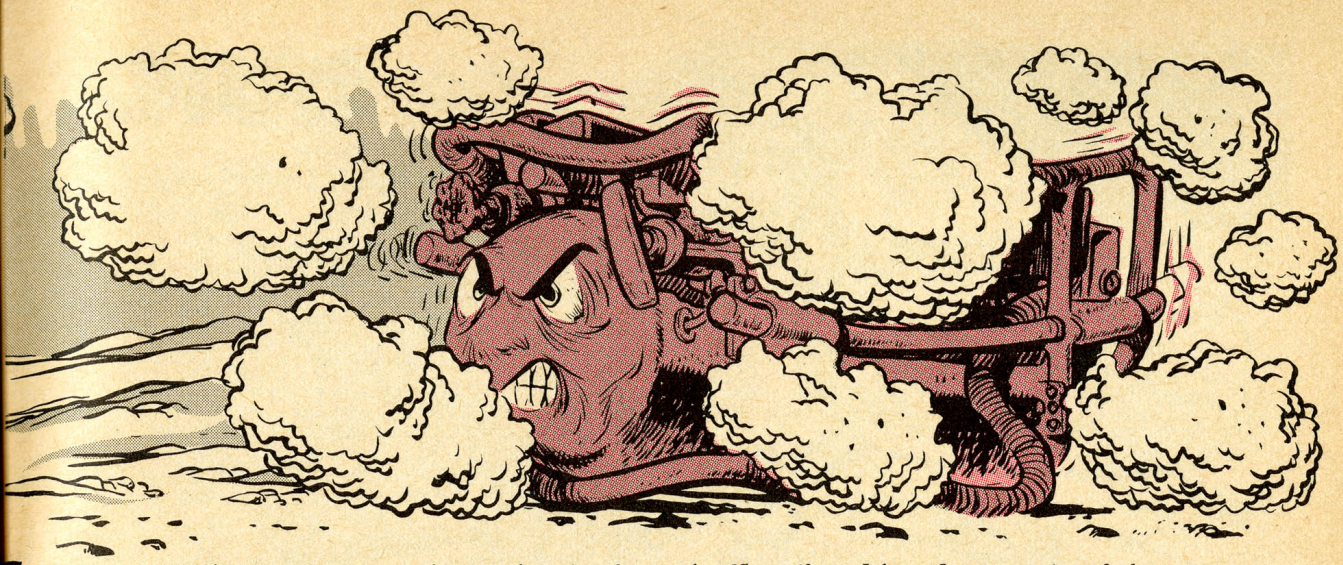
To keep 'em snug, just take the front baffle off and bend a couple of the prongs on the plugs over and back against the metal they're hooked to. Put the baffle back and you're rid of your rattle.

Beauty Aid For Decons



How's your M3A2 decon look these days? Is she a little worn, nicked, aging in spots? Does her wooden tank have that dried-out skin look with a little rot, maybe?

Then send her back to your support outfit for first aid treatment. They'll give her a new face-and-leg job, replacing her wooden tank and platform with steel ones, just like MWO 3-223-1 (4 Feb 58) says. She'll not only look and act like new but she'll get a new number—M3A3.



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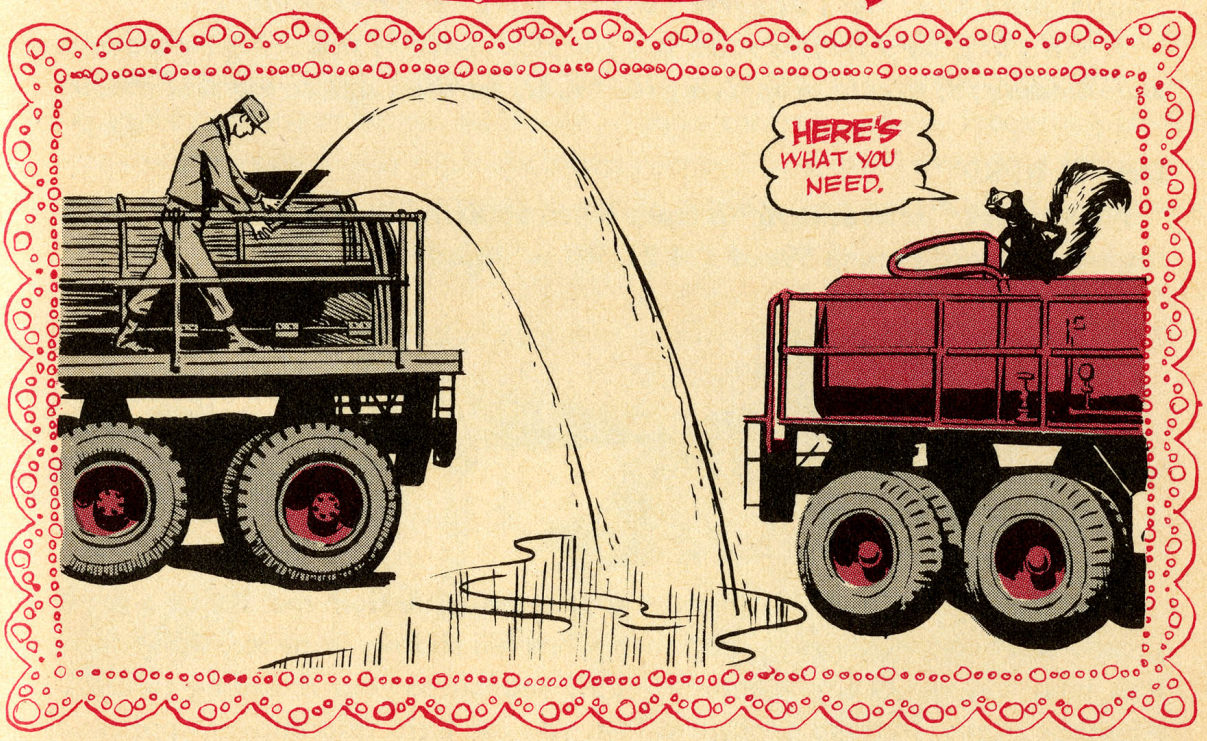

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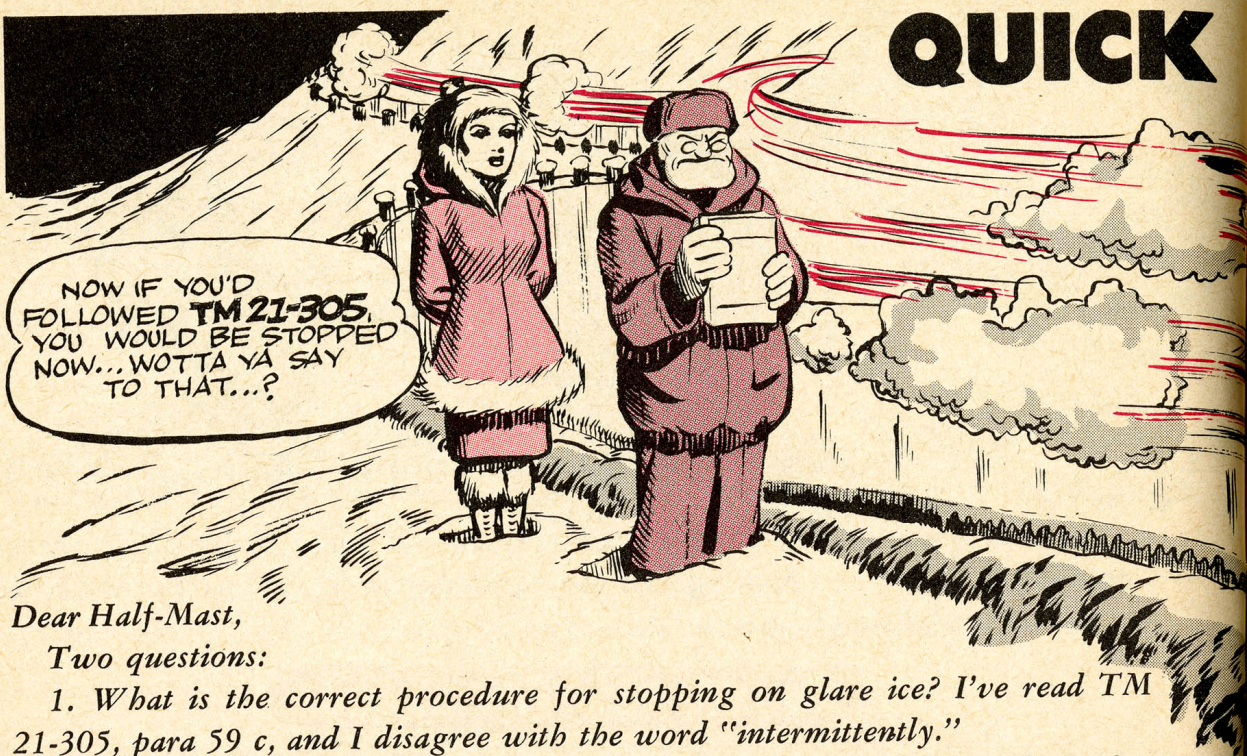
QUICK



Dear Half-Mast,

Two questions:

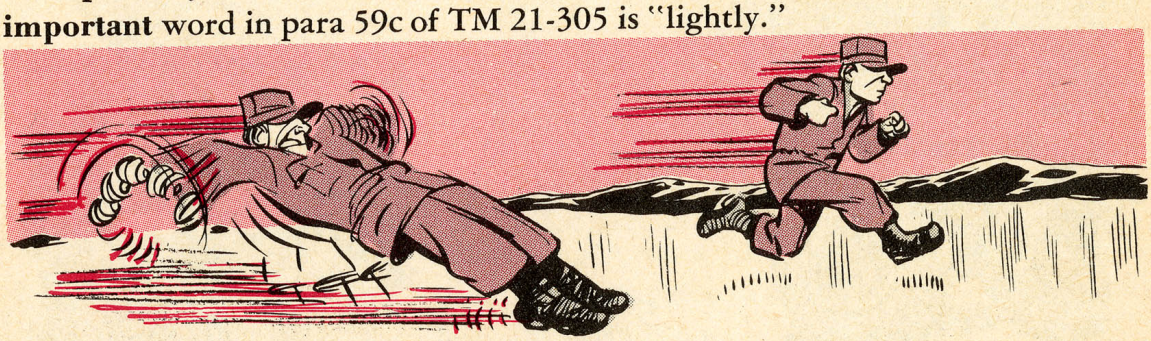
1. What is the correct procedure for stopping on glare ice? I've read TM 21-305, para 59 c, and I disagree with the word "intermittently."

2. On a dry, hard surface road, can you stop faster by slamming on the brakes and skidding the tires than applying the brakes hard enough to not skid the tires?

Lt R. S.

Dear Lt R. S.,

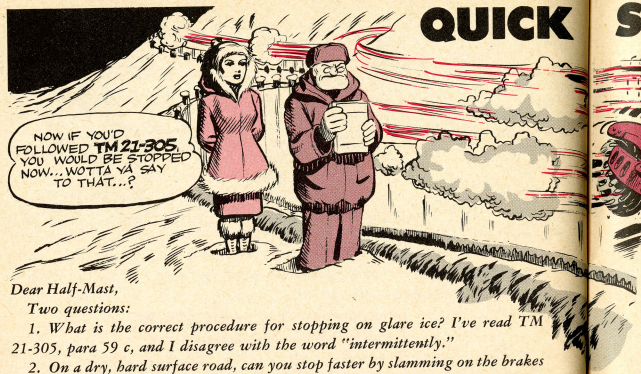
Nope, sorry. "Intermittent" is right when applying brakes on ice, but, Sir, the **important** word in para 59c of TM 21-305 is "lightly."



The whole point, and this answers your second question, too, is that a tire has greater traction when it is turning than when it is sliding. So on ice, as the manual tells you, you use engine compression all you can as your retarding force. And when the engine starts to rev up too fast, you use **light** intermittent applications of the brakes to slow down, but to slow down **without** causing the tires to slide.

Now about that second question. Again, as I said, a tire has the ability to transfer more force to the ground when it is turning than when it is sliding. Wherefore you'll stop in a shorter distance if you do not lock your wheels, if you can correctly judge the forces you're playing with, and use all the brakes you can without sliding the wheels.

QUICK STOPS



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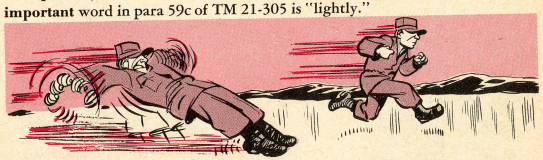

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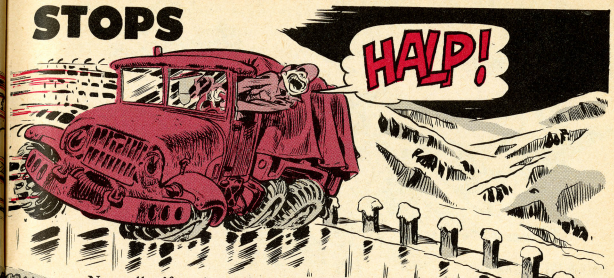
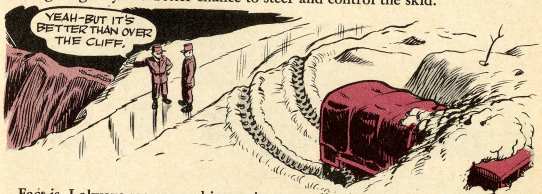


Naturally, **if** you're so determined to keep from locking your wheels that you only use half the possible braking effort, you'll roll right on into trouble. This is so tricky that our flying friends have a real clever device on their aircraft that releases the brake a little whenever the wheel slides.

And of course you know, Sir, that even if the stopping distance were the same, or perhaps just a little longer, you'd still be safer making a panic stop with your wheels turning because you still have steering control, and can frequently dodge the trouble even if you can't completely stop. But it works out that when you lock all wheels, you not only skid out of control, you also skid farther than a rolling wheel needs to stop you.

So it comes out **don't skid your tires** at any time. And that ties back to your first question, too. Because if you do start a slide on the ice, releasing your brakes will again give you a better chance to steer and control the skid.



Fact is, I always recommend intermittent application of brakes, smoothly, on any road surface. They'll get a chance to cool, and will actually stop you in a shorter distance than you can get with one steady application that heats the drums and expands them away from the brake shoes. (Called "brake-fade," and that's why the new aircraft and race cars are using the spot brakes.)

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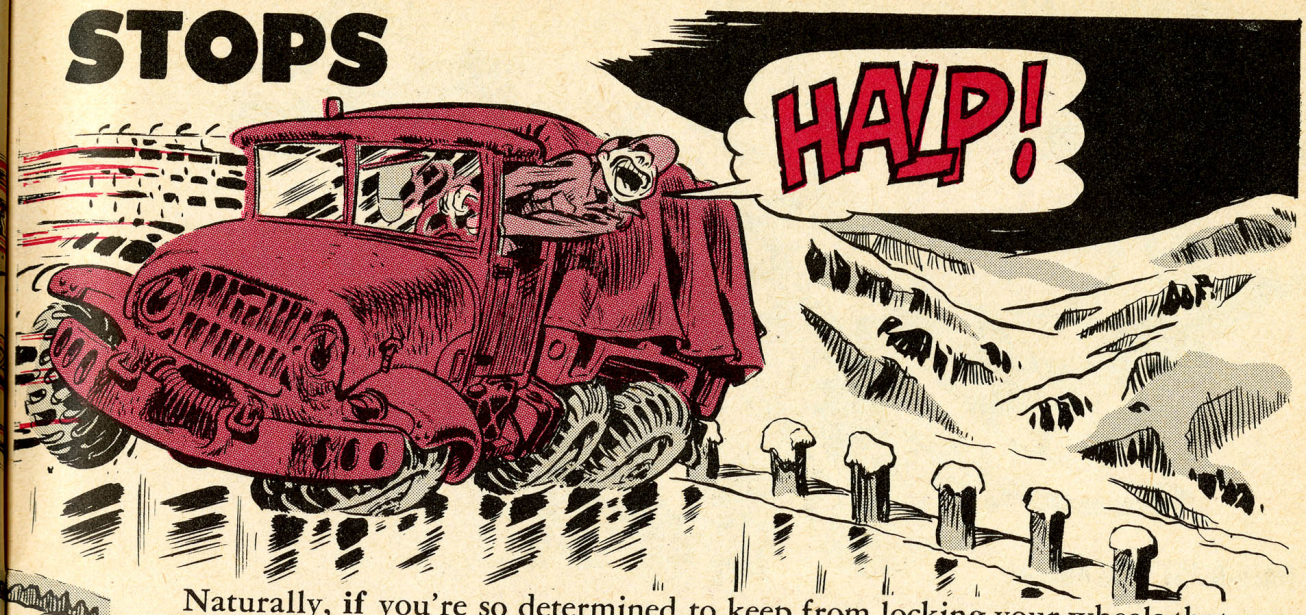

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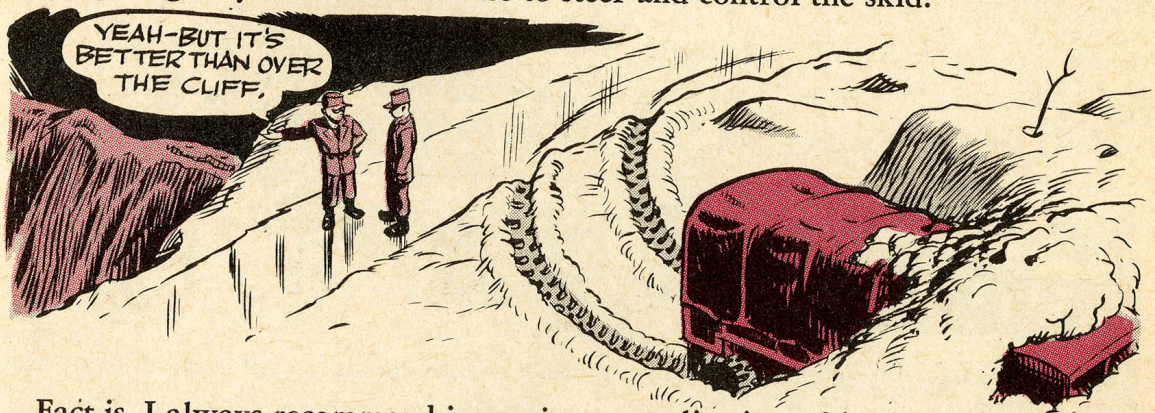

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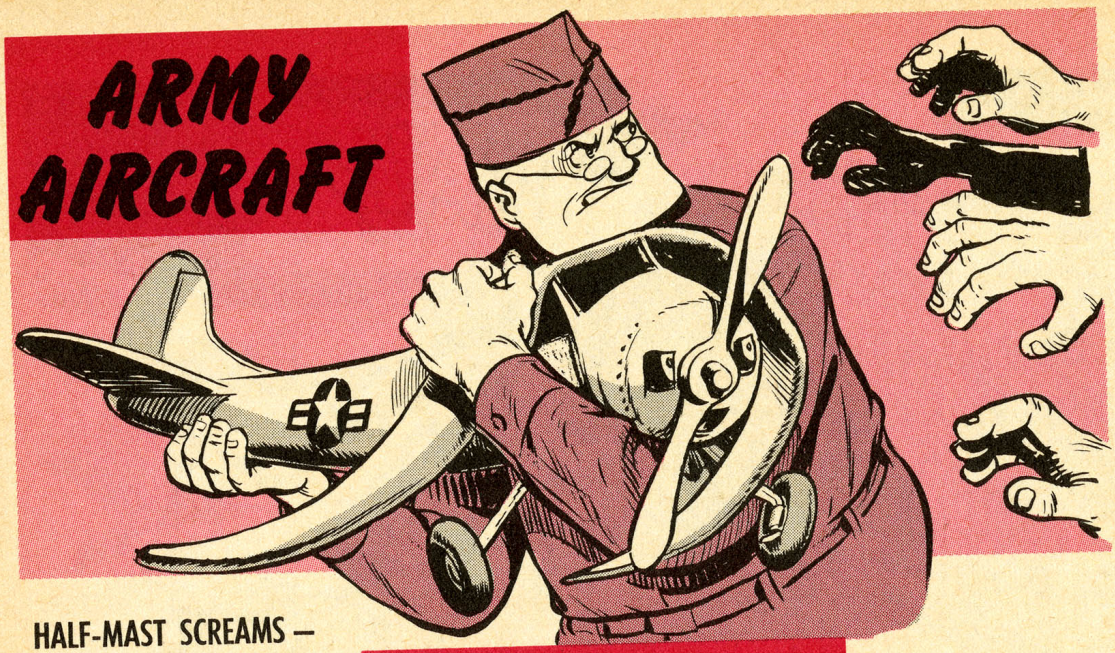


HALF-MAST SCREAMS —

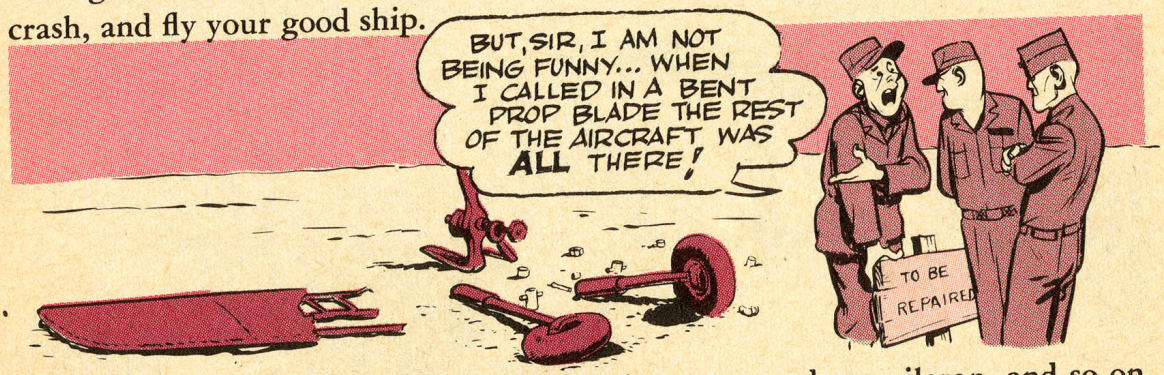
CANNIBALS!!

Look out! The man is getting set to lower the boom on anybody caught swiping parts from unserviceable aircraft.

Most aircraft outfits got an instruction sheet what recounts the provisions of AR 750-1500-8 (10 Apr 58), and makes reference to "Legalized Cannibalization" —and TCSMC-FAD put out an interpretation of AR 750-1500-4 (23 May 1958) for the benefit of everybody.

But look once at the problems:

Happens you've got a ship crippled up and waiting for TSMC to decide to fix it or to salvage it. Meantime you've got another ship AOCP for a generator, and can't get one. So it's real easy to slip over and swipe the good generator off the crash, and fly your good ship.



Next guy along gets a carburetor. Another man needs an aileron, and so on. So what? All these parts are going onto government aircraft, yes? Nobody's taking 'em home for personal use so what's the harm?

We-e-e-l-l—the harm comes in when the TSMC goes by the reports submitted right after the crash, and decides that the hangar-queen is economically repairable. Maybe the reports only described a bent fuselage, or perhaps just a smashed wing.

So they send the ship to be fixed. And all of a sudden it turns out that half the engine accessories and a couple of control surfaces are gone. Wug! The cost of replacing 'em goes up over the limit, and an otherwise repairable aircraft has to be salvaged. So Uncle comes up shy one sky buggy, and much money.

Cease-and-desist is the word for it.

Now, here's another thing. Cannibalizing parts now, in peace time, will louse up the parts requirement records from here to breakfast. And it's these records that are used to determine stockages and supply coverage. So you're really hurting your chances of finding what you need waiting for you when you need it.

Of course, comes shooting and you go to a forward area, all bets are off and you'll use anything you can get your hands on. But in peacetime, "Keep your grimy meathooks offa them now crashed aircraft."

COMING 'ROUND THE BEND

Gentlemen, we gotta problem: There's been a new type of flexible hose put into the supply system which should give unlimited service life. It's a stainless steel braided outfit which contains a flexible liner going by the trade name of "Teflon." It's being used to make up fuel and oil hoses and they are being carried in stock as a replacement for the old synthetic rubber hoses.

About the only way you can tell if the metal braided new hose you get from Supply is Teflon-lined or synthetic rubber is to slightly bend them both. The Teflon-lined hoses are stiffer than the synthetic rubber line hoses.

So what? So, while the Teflon hoses are more durable than the rubber ones, you gotta be critical about how much you bend them—both before they're completely installed and after you got them connected. There is a minimum bend radius for each inside diameter measurement. If you should bend them—on purpose (to install) or by accident—more than the allowable minimum bend radii you may crimp the liner and partially block the hose. You know what this can do to you if it happens to be a fuel hose or an oil hose to the transmission that is restricted, you being airborne at the time.

HOSE SIZE (ID)	RADIUS, (MINIMUM)
—3	1½ inches
—4	2 inches
—5	3 inches
—6	4 inches
—8	4⅝ inches
—10	5½ inches
—16	7⅜ inches
—20	9 inches

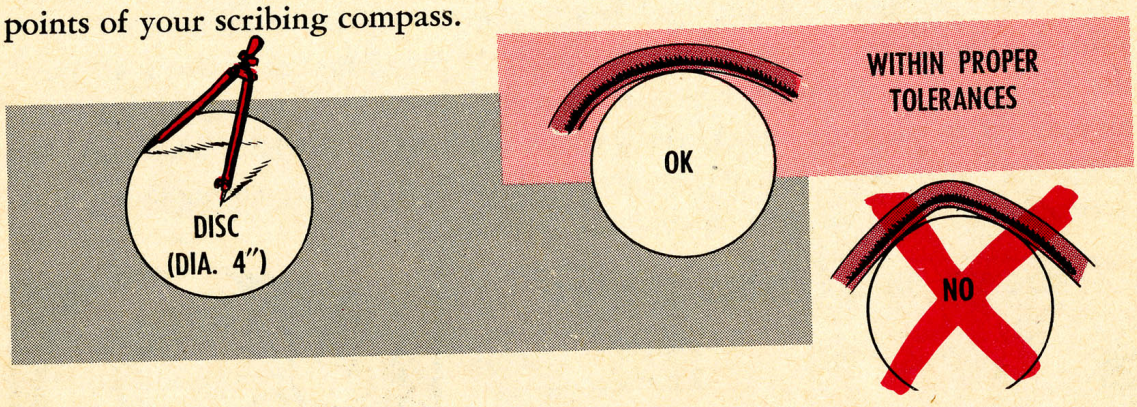
So, here's the pitch. Whenever you replace a hose, regardless of who the manufacturer is, see if the new one has a Teflon-liner. If it has, you gotta be careful —careful when you install it and careful to check it after it's in place—to be sure, very very sure that none of the bends are any shorter than the table on page 59, or you may find yourself in serious trouble.

So-o-o-o, if you do find a shorter bend (more acute) has been put on the hose either during installation or after hook-up, examine it carefully to see if you crimped it. How? Check the braid for visible damage.

If your Aircraft Maintenance Officer goes along with the idea, you may be able to put the old hose back for awhile, but if not, you'll have to ground the aircraft.

And naturally you'll report the problem at once by TWX UER, followed by DA Form 468, to the U. S. Army Transportation Supply and Maintenance Command, 12th and Spruce Streets, St. Louis 3, Missouri, to the attention of the applicable aircraft project officer 'cause this problem will be handled on an individual hose and aircraft basis.

To help you check and make sure that you haven't exceeded the minimum bend radii for each dash hose, make yourself a flat stiff disc which can be shoved up to the bend. Here's how! Say you want to check the dash 4 hose after you got it installed. Take a piece of flat rigid material about 4½ inches square and about .025-.035 thick; lay it on a flat surface; take a pair of dividers (both ends pointed), and measure 2 inches between points, then keep one point stationary and scribe a circle, which when finished will measure 4 inches across. You can do the same for each dash hose size if you want to, so, you'll have a gadget to use for each size you might need. Only remember, the distance which corresponds to the radius of each disc will have to be measured with a ruler between the two points of your scribing compass.



Now you have the dash 4 hose all installed in your machine.

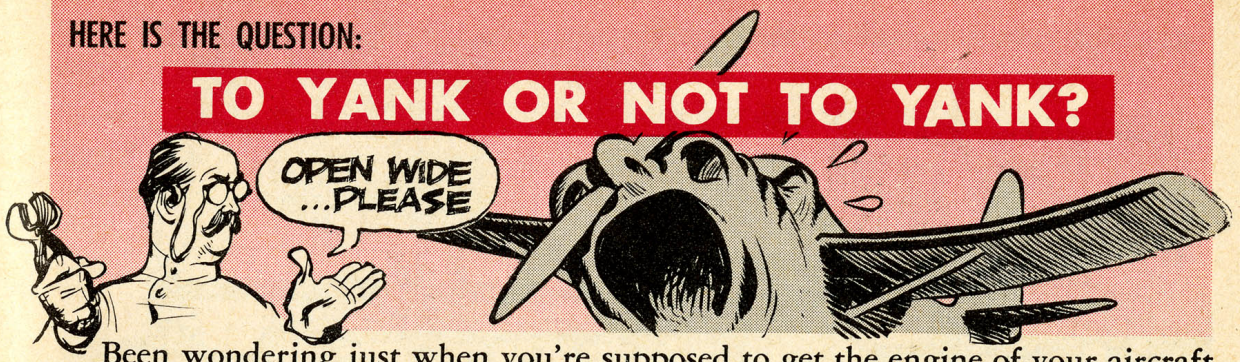
Find the bend.

Push the disc into the bend.

If you see daylight on either side of the bend you are within proper tolerances. If you see daylight between the disc and the point which has the greatest bend, it's incorrect.

HERE IS THE QUESTION:

TO YANK OR NOT TO YANK?



Been wondering just when you're supposed to get the engine of your aircraft yanked for a replacement?

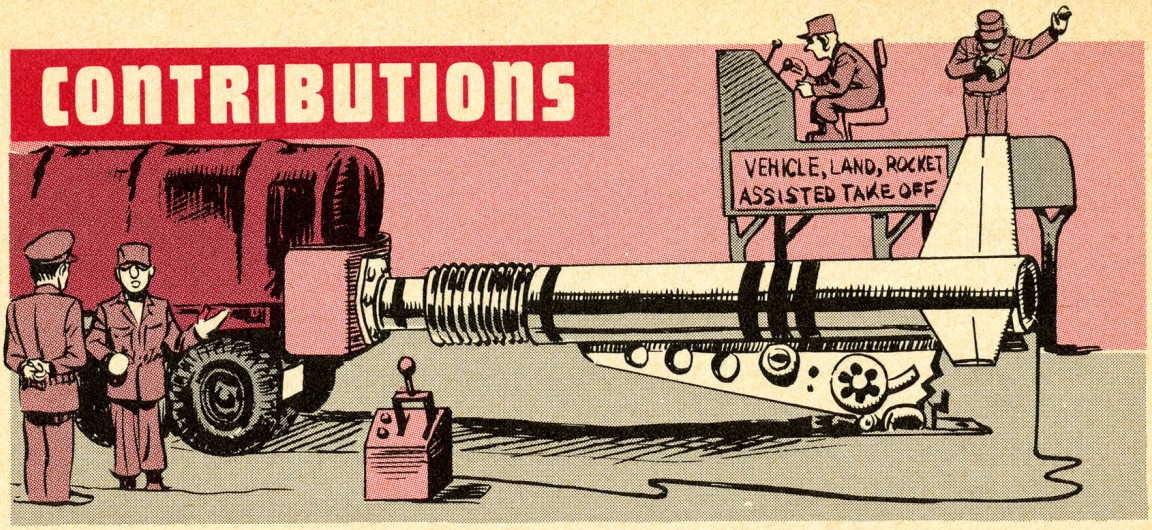
Little wonder, 'cause pages 11 and 12 got left outta Table VII in AFTO 00-25-4 when it was revised 16 Dec 1957. So, you've got problems.

Now, until you get your revised -6 handbooks for your aircraft, you can go by this table for engine change, or maximum operating times.

AIRCRAFT	ENGINE	MAX. HOURS
L-19A & E	O-470-11	1200
TL-19D	O-470-15	1000
LC-126	R-755-A2, R-755-11	1200
L-20A	R-985-AN-1, R-985-AN-3, R-985-AN-39, R-985-AN-39A	1400
L-23A & B	O-435-17	1000
L-23D	O-480-1	600
L-23E	GO-480-C2C6, GO-480-C2D6	1000
U-1A	R-1340-59, R-1340-61	1200
YL-26	GO-435-C2B, -C2B1	1000
L-26B	GO-480-G1B6	1000
L-26C	GSO-480-A1A6, -B1A6	600
RL-26D	GSO-480-A1A6, -B1A6	600
H-13C	O-335-5, -5A, -5B	600
H-13D	O-335-5, -5A, -5B	600
H-13E	O-335-5, -5A, -5B	600
H-13G	O-335-5, -5A, -5B	600
H-13H	O-435-23, -23A, -23B	600
H-19C	R-1340-57	500
H-19D	R-1300-3, -3A, -3B, -3C, -3D	600
H-21C	R-1820-103	600
H-23B & C	O-335-6, -6B	600
H-23D	O-435-23B	600
H-34A	R-1820-84A	600
H-37A	R-2800-54	600

And there you are: As you can see, six hundred hours is the end of the line for the greatest number of engines. It's not too hard to remember if you have one of the aircraft that goes longer between changes.

CONTRIBUTIONS

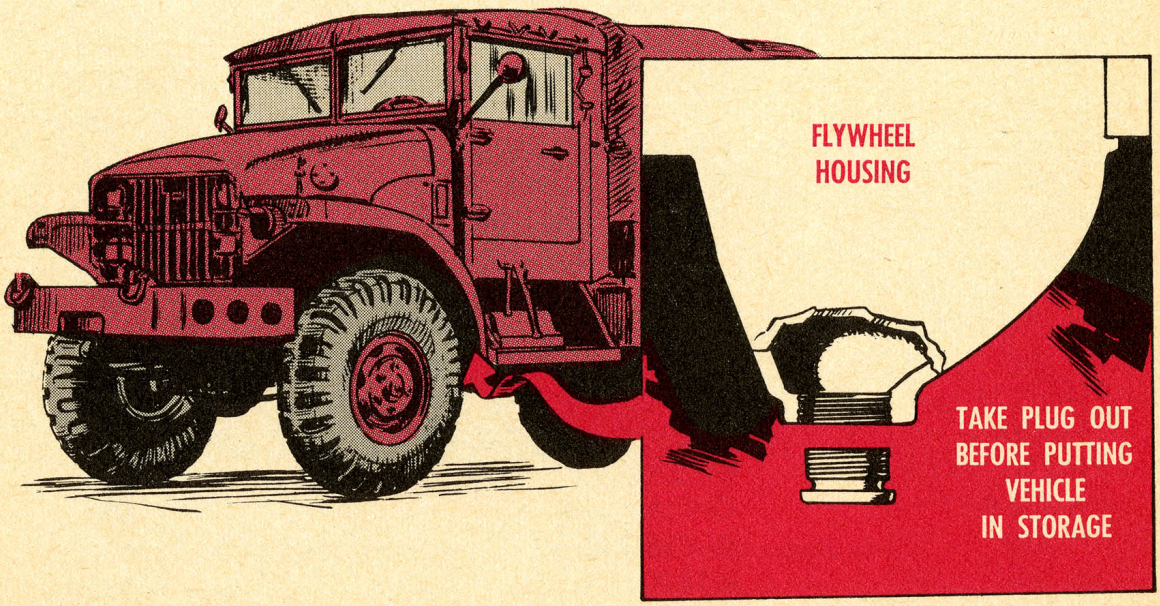


END YOUR STARTER TROUBLES

Dear Editor,

Last year, when we got our vehicles ready for National Guard summer field training, we found that many of the starters on our G749-series 2½-ton trucks were corroded and rusted inside. Yet, on those G749's that were used and maintained by pulling the flywheel housing drain plug every 1,000 miles, like para 12 of MWO ORD G749-W23 (24 Mar 55) says, the starters were fine.

We got the notion that when a vehicle lies in storage with the drain plug left in, it can cause all sorts of woes to the starter, because moisture can't evaporate. When we got back from camp, the order went out to take the drain plugs out of



the flywheel housings of those vehicles we put in storage—we put the plug in the vehicle's glove compartment. This year—no rusted starters.

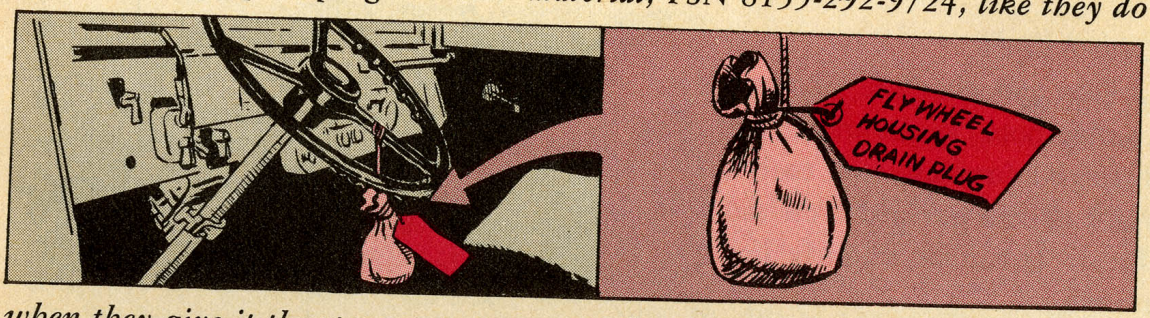
The proof of the pudding's in the eating, as the saying goes. So, to keep a starter in good shape during storage, pull that drain plug when you store a G749-series

truck—and leave it out, so any moisture that builds up can evaporate. Much the same as is done for other M-series vehicles.

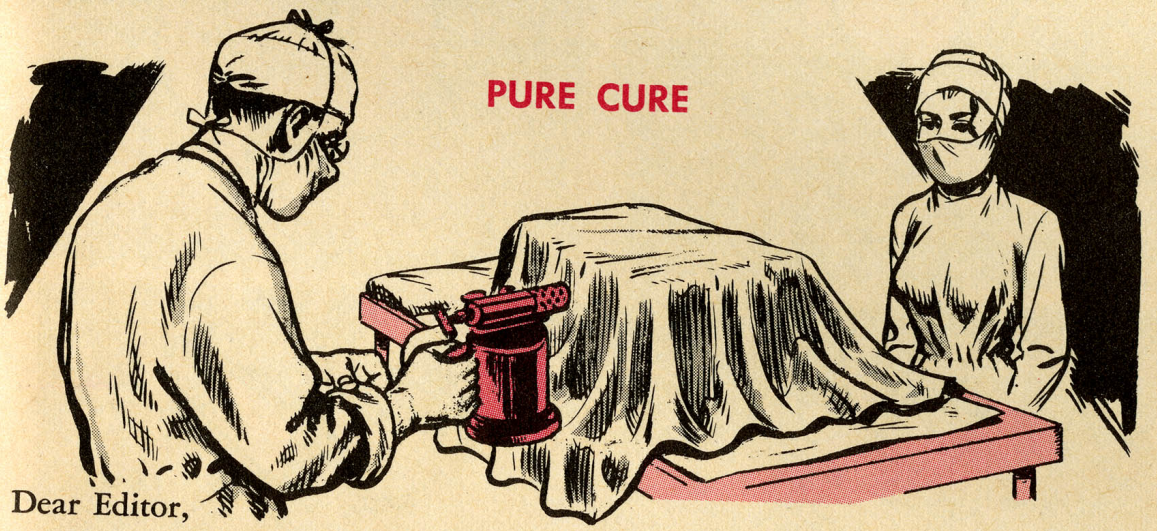
As a matter of fact, TB ORD 554 (7 Sep 56) says to keep the plug out of the flywheel at all times, except when fording. TB ORD 554, however, doesn't apply to the G749-series 2½-ton trucks.

Sgt J. Phillips
New Jersey National Guard

(Ed Note—OK. But when you remove the plug, clean and coat it and the plug opening in the flywheel housing with corrosion preventive compound, FSN 8030-231-2347. Then, wrap the plug in barrier material, FSN 8135-292-9724, like they do



when they give it the storage treatment under SB 9-4. Then, put it in a bag, and identify what it is. Also, put a warning tag on the bag saying that the plug is out of the flywheel housing. Attach the bag to the steering wheel. This'll keep someone from losing the plug or running a truck without it.)



Dear Editor,

When it comes to maintaining vehicles, the closest thing we have to an incurable disease is battery box corrosion. It's almost like cancer the way it keeps coming back when you think you've managed to cut it out.

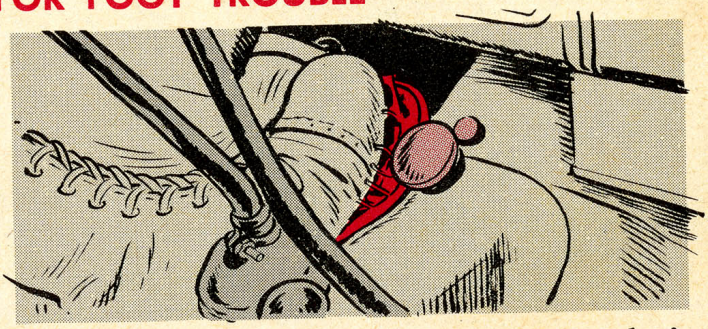
Well, one of the outfits I was in before decided to treat it like cancer. When they found that there always seemed to be some little touch or trace of it left to start up again, they decided to give it the old cancer burnout treatment.

Of course, we didn't try radium on it. What we did do, as part of the preparation for re-painting, was to take the carrier out of the vehicle and burn off all the last traces of paint or corrosion—not enough to damage the temper of the metal, but enough to get it out of the smallest crack and corner.

It worked, too. Of course, it isn't a sure cure, but it has helped us cut costs and time in fighting battery box cancer.

SFC E. N. Nance
250th Rocket Bn
Ft. Bragg, N. C.

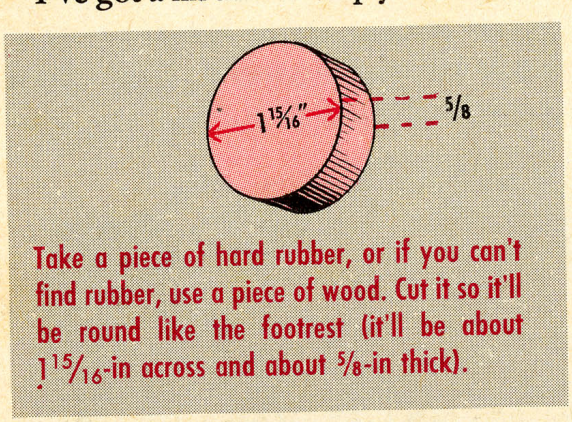
CURE FOR FOOT TROUBLE



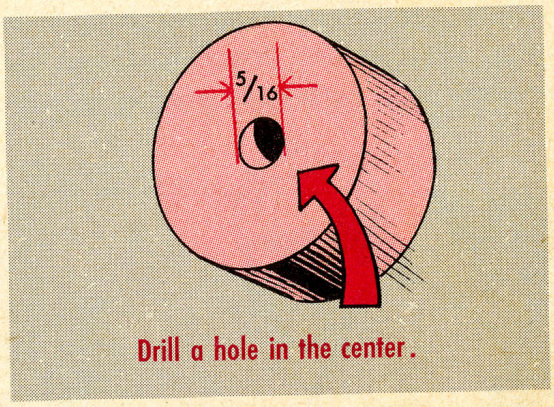
Dear Editor,

Ever get the sole of your combat boot caught under that infernal footrest just to the right of the gas pedal on the Jeeps? It can be mightly unnerving.

I've got a fix that'll keep you out of this fix. It's simple and anyone can make it.

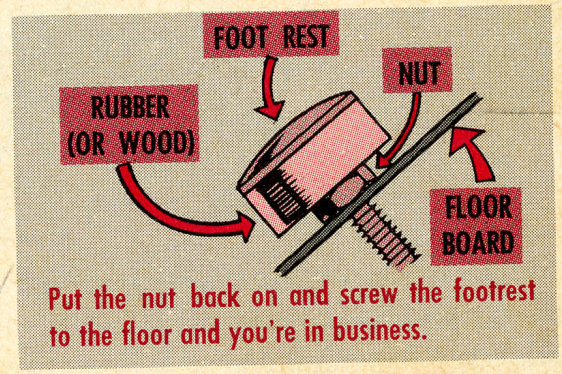


Take a piece of hard rubber, or if you can't find rubber, use a piece of wood. Cut it so it'll be round like the footrest (it'll be about 1 15/16-in across and about 5/8-in thick).



Drill a hole in the center.

Unscrew the footrest and take the nut off and slip the rubber or wood on the footrest.



Put the nut back on and screw the footrest to the floor and you're in business.

CWO C. M. Ignacio
Hilo, Hawaii

(Ed Note—A good way to get rid of foot trouble.)

Connie Rodd's BRIEFS

Bolt boobs

Some of you tank crewmen can cause yourselves extra headaches by not yanking the locking bolt **all-the-way** back each time you're about to close the loader's hatch. If you don't, the bolt end'll hang out too far, catching the inner lip of the hatch as you close her. Result: Bent bolt!

Tool talk

Been wondering how to handle those pioneer tools on your M-series trucks and tractors? You can get the dope on mounting and stowing in a new technical bulletin. It's TB Ord 2300-20/4 (18 Aug 58).

Radio active?

Got a radio on your vehicle? Then take a gander at TB Ord 2300-20/3 (31 Jul 58). It tells you to stencil yourself a reminder next to the ignition switch about shutting off all electric gear before you start the engine.

.50 cal. chamber brush

It's quite a job cleaning the chambers of your .50 cal. machine gun barrels but now supply's willing to lend a hand. No, they don't have extra men around to do the job—they have a Brush, chamber cleaning, FSN 1005-508-2589 (A039).

One and only

One too many service headlights have turned up in the G259 Ord 7 and 8 SNL's. Next time you order lights for your M55 SPH or M53 Gun, SP, **don't** ask for FSN 6220-776-5212. This baby was never meant for these vehicles. The one to get is Light, Head, Service, Assembly FSN 6220-741-9686. It's the one, and only one to be used here.

Poked pads

Some of you tank jockeys might have your feet cause a hole in your head if you're not careful. Seems some men going in and out of the driver's hatch are coming down hard and careless with their boon-dockers, ripping the crash pad covers. Out comes the padding material **and** your insurance against a cracked noggin.

Track sprockets worn?

In case you've not yet seen TB Ord 1018 (24 Jul 58), it tells you about a handy gizmo—the profile gage—that'll help you keep tabs on when to ask for new track sprockets on your combat vehicles. The TB also tosses in stock numbers for the gage you'll need for your particular tracked vehicle.

NEED A MANUAL?
FIND 'EM LISTED IN YOUR
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310-2 BLANK FORMS
310-3 FM's, ATP's, ATT's, POSTERS, FIRING TABLES
310-4 TM's, TB's, SB's, LO's, MWO's
310-5 TRAINING AIDS
310-7 TOE's, TO's, TD's, TA's
310-21 SIGNAL SM's
310-22 TRANS-PORTATION SM's
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